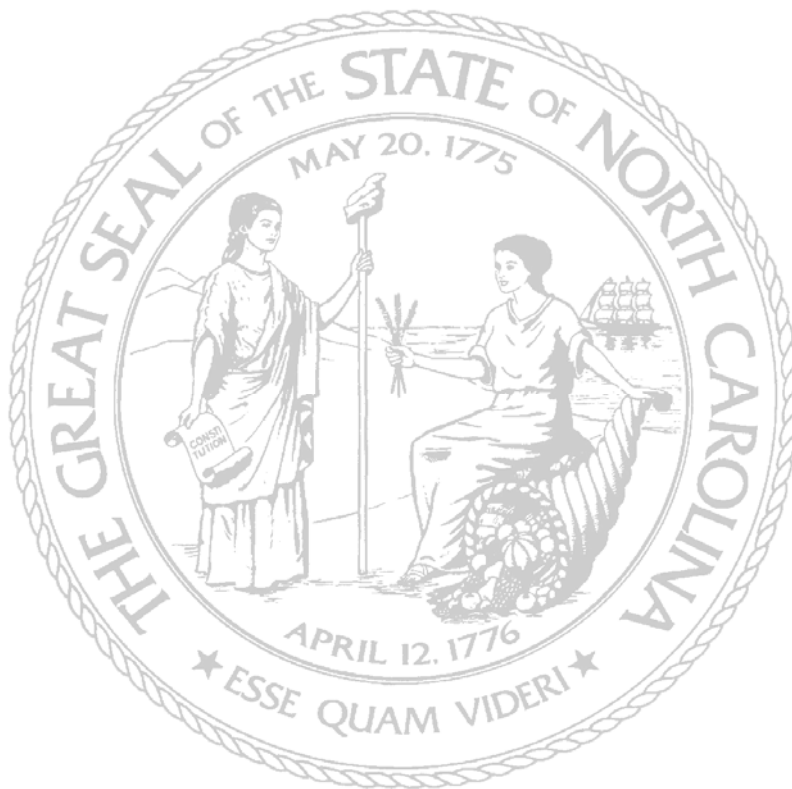# Governor's Highway Safety Program

North Carolina

FY 2009
Highway Safety Plan

GOVERNOR MICHAEL F. EASLEY
STATE OF NORTH CAROLINA

SECRETARY LYNDO TIPPETT
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

MEMORANDUM

To: Ms. Beth Baker, Regional Administrator, NHTSA Region III

From: Darrell Jernigan, Director

Re: North Carolina FY 2009 Highway Safety Plan

Date: September 1, 2008

The Governor's Highway Safety Program is submitting its Fiscal Year 2009 Highway Safety Plan (HSP) for your review and consideration.

The HSP outlines specific expenditures of funds for FY 2009 and includes a brief description of representative contracts. The project contracts included in the Plan were selected for funding based on the probability that each would provide a positive impact on the goals outlined in the HSP. Also included for your review are the necessary certifications followed by a listing of all equipment costing $5,000 or more.

Feel free to contact me for further assistance or if you have any questions or concerns regarding the FY 2009 HSP.

cc: John Sullivan
      Administrator, FHWA

Enclosures: As stated

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**FY 2009
Highway
Safety Plan**

EXECUTIVE SUMMARY

Each year, the NC Governor's Highway Safety Program (GHSP) prepares a Highway Safety Plan (HSP) as a guide for the State's federally funded safety activities. A major component in the production of this document is the identification of safety problems within the state through an analysis of crash data. The results of this problem identification effort are then used as one means of justification for determining where safety improvement funds are spent. With the available funding for safety improvements and programs diminishing, it is critical that such funding be carefully allocated to have the greatest impact on safety.

The objective of this report is to help GHSP in the identification of safety problems within the state. Here is a summary of the findings:

Overall Trends in Crashes by Severity in North Carolina

- Fatality rates (fatalities per 100 MVM) in North Carolina have been decreasing in the last 10 years. However, the number of fatalities has remained somewhat steady

- During the last 3 years, the total number of injury and fatal crashes has not changed significantly. However, the number of reported property damage only (PDO) crashes has increased significantly.

Alcohol-Involved Crashes

- During the last 3 years, there has been a fairly constant in both the total number of drinking drivers in crashes and the percent of all-crash involving drivers who had been drinking with a slight increase in 2006

- The 21-24 age groups are associated with the highest percentage of drivers who had been drinking while being involved in a crash.

- Hispanic/Latino drivers have the highest rate of drinking while being involved in a crash. Part of the reason for their high rate is that the North Carolina Hispanic/Latino population is largely male and young – the primary group of drinking drivers in all racial/ethnic groups.

- Crashes involving drinking and driving is most common during early morning hours.

- About 54% of drinking driver crashes occurred on rural roadways.

Young Driver Crashes

- Crashes involving drivers age 15-20 have increased in the last 3 years, but this can completely be explained by population growth. There has been very little change in the severity of crashes during this period.

- Among young drivers, the driver did something to contribute to the crash in 68% of all crashes, while only 48% of drivers age 25-54 contributed to their crash. A substantial proportion of young driver errors are accounted for by three actions: failure to yield, failure to reduce speed appropriately, and driving too fast for conditions.

- Alcohol involvement by crash-involved young drivers, all of whom are under the legal drinking age, is lower than for all age groups up to age 50.

Motorcycle Safety

- The number of motorcycle crashes has been increasing for about 5-years along with the North Carolina population and number of registered motorcycles.

- The typical motorcycle crash occurs between April and October on a Friday, Saturday, or Sunday between 12:00 noon and 7:00 p.m. during clear weather on a rural two-lane state secondary road with a 55 MPH speed limit.

- Curved roadway crashes are overrepresented in motorcycle crashes and are associated with greater risk for fatal/severe injury than crashes straight roadway segments.

- Rollovers, hitting a fixed object, rear-ending another vehicle, the motorcyclist or another vehicle making a left/right turn, and running off the roadway are the most harmful precipitating events of motorcycle crashes.

- Fatal/severe injury to the motorcyclist was strongly associated with head-on crashes, hitting a fixed object, left/right turns, and leaving roadways.

Pedestrian Safety

- Although crashes involving pedestrians represent less than 1% of the total reported motor vehicle crashes in North Carolina, pedestrians are highly over-represented in fatal and serious injury crashes. Approximately 12% of the fatal crashes and 9% of A-type (disabling injury) crashes in North Carolina involved pedestrians.

- Pedestrian crashes are most likely to occur in the afternoon and early evening between the hours of 2 pm to 10 p.m., with over half of pedestrian crashes occurring during these eight hours.

- While most crashes (55%) occurred during clear or cloudy weather *and* under daylight conditions, 18% occurred during nighttime on lighted roadways (clear or cloudy) and another 15% occurred during nighttime on unlighted roadways (clear or cloudy conditions).

- The 50 and over group has shown numerical and proportional increases in the pedestrian crashes each of the last three years. On average, adults (30 – 49) accounted for greater numbers and proportions of pedestrian crashes than other groups. However, the proportions of those killed and seriously injured in a pedestrian crash is higher for the older age groups.

- Blacks are over-represented in pedestrian crashes, and Whites are under-represented based on the population. However, there appears to be a decreasing trend in the proportion of crashes involving black pedestrians.

- The most frequent crash type involves *Pedestrian failure to yield*. It should be pointed out, however, that this crash type does not necessarily imply fault. For example, a pedestrian may detect a gap at a mid-block area and begin crossing, but a speeding motorist closes the gap sooner than expected and strikes the pedestrian.

Bicyclist Safety

- Bicyclists represent less than 0.5% of the total reported motor vehicle crashes in North Carolina, but represent 1.5% of the fatal crashes, and 2% of A-type (disabling injury) crashes.

- The number of bicyclist crashes has fluctuated over the past 3 years, but no obvious trend is apparent over this time. However, the number of crashes in 2006 might indicate a downward trend.

- Bicyclist crashes peak on Friday and Saturday.

- While most crashes (74%) occurred during clear or cloudy weather and under daylight conditions, 17% occurred during nighttime on lighted or unlighted roadways (clear or cloudy conditions).

- There seems to be an increasing in the number of bicycle crashes involving adults' ages 40 to 69, and a decreasing trend among children up to age 15. It is not clear if this may be due to changes in riding patterns among the different age groups and/or change in the population of the specific age groups.

- The most frequent crash type (about one-fifth of bicycle-motor vehicle crashes), involved *Sign-controlled intersection* violations by bicyclists and motorists.

- Children were most often involved in *mid-block ride out* crashes, more typically occurring in urban areas.

Older Driver Safety

- The number of crash-involved older drivers has shown only modest increases over the past 3 years. Although drivers ages 65+ make up only 7.5% of the crash-involved driver population, they comprise 15% of fatally-injured drivers.

- Nearly one in five drivers killed in crashes in the western Mountain region of the state is age 65+. As the North Carolina population ages, this proportion will rise, not only in western North Carolina but in all parts of the State.

- For the most part, older driver crashes tend to mimic the locations and situations where older adults drive, (i.e., on shorter trips, lower speed roadways, about town, during the daytime, under favorable weather conditions, etc.).

- Drivers ages 65+ are more likely to crash while making a left turn, and the crash risk increases along with their age.

- Older drivers are more likely to be cited for contributing to their crash, with the most commonly cited contributing factor being failure to yield to other traffic.

Speed-Related Crashes

- Speed-related PDO crashes have increased substantially in the last two years. However, the number of injury and fatal speed-related crashes has changed very little during this period.

- Speed-related crashes are in general more severe compared to non-speed-related crashes.

- A higher percentage of crashes in rural areas are speed-related compared to urban areas.

- The 15-17 age group is associated with the highest percentage of speed-related crashes.

- A large number of speed-related crashes occur during the morning peak, the afternoon peak, and between 1:00 and 3:00 a.m.
- Interstates have the lowest number of speed-related crashes, but the highest percentage of speed-related crashes. State Roads have the highest number of speed-related crashes.

- Close to 80% of crashes where a rear-end crash was the first harmful event, are speed-related. A significant percentage of crashes (close to 50%) where the first harmful event is a Jackknife/Overturn/Rollover, collision with a fixed object, or ran-off-the-road, are speed-related.

Occupant Restraint

- Following the enactment of a primary enforcement seat-belt law in 1985 and the "Click It or Ticket: campaign in 1993, the observed driver seat belt usage rate has increased from approximately 65% in the early 1990's to 89.8% in 2008.

- The latest survey of seat-belt usage was conducted during June 2008. The usage rate at that time was 90.4% of drivers and 85.5% for passengers.

- A larger percentage of women use a seat belt (91.9%) compared to men (88.9%).

- Typically, middle-aged and older drivers have a higher usage rate compared to young drivers.

- Information on restraint usage for individuals involved in an accident is usually self-reported and not reliable, especially for less severe crashes.

Traffic Records and Data Collection

It has become very obvious during the compilation of this plan that numerous problems exist in the area of record collection and disbursement. The data for this year Highway Safety Plan has been gathered by GHSP directly from NCDOT and FARS. This has resulted in several glaring differences from prior years reporting. The overall system is being studied and modernized as a part of the activities of the Executive Committee on Highway Safety and the Traffic Records Coordinating Committee. Future years will be more accurate and will show trending in a more accurate method.

North Carolina Highway Safety Media Plan

The North Carolina Governor's Highway Safety Program (GHSP) Media Plan will target three areas of immediate concern: safety belt usage, impaired driving and speeding. All media for these areas will utilize either paid media, earned media, or both.

In the area of safety belt usage, North Carolina will participate in the national "Click It or Ticket" mobilization in May 2009. GHSP will dedicate current allocations to target low safety belt usage areas and demographics. The paid media spots will convey an enforcement message. Earned media will be conducted statewide with planned campaign kickoffs and approximately 1,500 checkpoints planned for the mobilization.

North Carolina will also participate in the September 2009 impaired driving mobilization. Earned media will be gained from the kickoff as well as the high visibility checkpoints throughout the campaign.

North Carolina will continue to implement "R U Buckled", a safety belt campaign targeting high school age drivers in FY 2009. This program launched in the fall of 2005 in 53 high schools across the state and is now in more than 170 high schools covering 74 counties and impacting over 57,000 student drivers in North Carolina. North Carolina plans to eventually have this campaign implemented in all high schools in the state.

GHSP will also utilize sports marketing to reach target demographics. Currently, GHSP has commitments from the Stanley Cup Champions of the National Hockey League, the Carolina Hurricanes, the Carolina Panthers of the NFL, Lowes Motor Speedway and all four of the Atlantic Coast Conference teams in North Carolina to provide advertising to reach their fans. Advertising will target all three areas of traffic safety mentioned.

MISSION STATEMENT

Our Mission:
The mission of the Governor's Highway Safety Program (GHSP) is to promote highway safety awareness and reduce the number of traffic crashes and fatalities in the state of North Carolina through the planning and execution of safety programs.

The GHSP mission is one part of the overall State Highway Safety Plan (SHSP) as set forward by the Executive Committee for Highway Safety.

Executive Committee for Highway Safety (ECHS):

- Comprised of 23 representatives from top management of selected disciplines involved in highway safety who control the current and potentially available resources for utilization in safety efforts.

- Meets on a quarterly basis.

- Responsible for the overall direction and administration of all SHSP activities.

- Responsible for defining high priority issues.

- Coordinate the Department's many safety efforts with an emphasis on efficiency of resources and the prioritization of programs.

- Identify, prioritize, promote and support all emphasis areas in the American Association of State Highway and Transportation Officials (AASHTO) Plan as well as emphasis areas not included in the AASHTO Plan for the coordinated highway safety effort to save lives and reduce injuries.

- Review and approve all actions submitted by the Working Groups and appropriate funds for implementation.

- Establish statewide highway safety goals and objectives.

- Review proposed highway safety legislation.

- Create mechanisms to foster multidisciplinary flows of communication.

North Carolina Executive Committee for Highway Safety

Member List

Susan Coward – Chair
Deputy Secretary of Intergovernmental Affairs
N.C. Department of Transportation

Robert Andrews, Jr., CSP
Director Safety & Loss Control
N.C. Department of Transportation

Debbie Barbour, P.E.
Director – Preconstruction
N.C. Department of Transportation

Fletcher Clay
Colonel
N.C. State Highway Patrol

Peg Dorer
Director
N.C. Conference of District Attorneys

Douglas Galyon
Chairman – NCDOT Board of Transportation
N.C. Department of Transportation

Herb Garrison III, MD
Director
Eastern Carolina Injury Prevention Program

Bill Gore, Jr.
Commissioner
NCDOT – Division of Motor Vehicles

David Harkey
Acting Director
UNC Highway Safety Research Center

Terry Hopkins
State Traffic Safety Engineer
N.C. Department of Transportation

Darrell Jernigan
Director
Governor's Highway Safety Program

Kevin Lacy, P.E., CPM
State Traffic Engineer
N.C. Department of Transportation

Calvin Leggett, P.E.
Manager – Program Development Branch
N.C. Department of Transportation

Axel Lluch
Director – Hispanic/Latino Affairs
State of North Carolina; Office of
The Governor

Jim Long, Honorable
Commissioner
N.C. Department of Insurance

Drexdal Pratt
Director
N.C. Office of Emergency Medical Services

Len Sanderson, P.E.
State Highway Administrator
N.C. Department of Transportation

Ernie Senecca
Director-Public Information Office
N.C. Department of Transportation

John Sullivan, III
Division Administrator
Federal Highway Administration

Steve Varnedoe, P.E.
Chief Engineer - Operations
N.C. Department of Transportation

Jim Westmoreland, P.E.
Director of Transportation
City of Greensboro

Michael "Mike" Yaniero
Chief of Police
Jacksonville Police Department

First Meeting of the ECHS

The first meeting of the Executive Committee for Highway Safety was held on April 24, 2003 in Raleigh, NC. The meeting was deemed a big success and was a chance for the committee members to meet and to be briefed on items such as the purpose of the committee, the need for the committee and what the AASHTO Strategic Highway Safety Plan is and why N.C. needs a SHSP.

Committee Adopts the AASHTO SHSP

Since the AASHTO SHSP and North Carolina's highway safety needs mesh so closely, it was recommended that North Carolina formally adopt the AASHTO Strategic Highway Safety Plan, as the Executive Committee's "working plan" and make modifications as appropriate. It was agreed that N.C.'s SHSP would be a dynamic document that could and would be revised as needed to reflect identified highway safety issues within the State.

At the recommendation of former Deputy Secretary Conti (former Committee Chair), the committee adopted the AASHTO plan for use and implementation in North Carolina.

Data Validation of Key Emphasis Areas

The committee decided that the decision making process should be data driven. The Traffic Safety Unit of the Traffic Engineering and Safety Systems Branch analyzed North Carolina crash data for all 22 key emphasis areas (where appropriate) as outlined in the SHSP. The results of the analyses were presented to the Executive Committee to assist the committee in prioritizing issues needing to be addressed.

Mission & Vision Statements

Mission and vision statements were created and adopted by the committee. These are:

Mission

Establish highway safety goals and objectives and prioritize, implement and evaluate coordinated, multi-disciplinary policies and programs to reduce fatalities, injuries and economic losses related to crashes.

Vision

North Carolina has a multi-disciplinary, multi-agency approach to research, planning, design, construction, maintenance, operation and evaluation of transportation systems, which results in reduced fatalities, injuries and economic losses, related to crashes. In addition, there is a coordinated effort to address emerging safety issues.

Adoption of National Goal for Fatalities

The Executive Committee unanimously adopted the national goal of 1.0 fatalities/100 MVM by the year 2008. Presently, NC's rate is approximately 1.5 fatalities/100 MVM, therefore, we face many challenges.

Establishment of Initial Working Groups

The Executive Committee reviewed the analyses of the crash data provided as it pertained to the key emphasis areas of the SHSP. The committee then discussed the data with their staff and individually ranked their top five priorities. All of the individual rankings were summarized and the initial six working groups were developed.

Data Validation of Key Emphasis Areas

To date; most of the working groups have met many times and are continuing to research the causes of the target crashes along with developing specific strategies aimed at addressing the identified needs.

Once a strategy is developed, it is prioritized and then in priority order, it is presented to the Executive Committee for approval. Upon approval, the strategy is assigned to the "Host" agency that would normally be responsible for the issue. It is then the responsibility of the host agency (with assistance from the Executive Committee as needed) to take the necessary steps to see that the strategy is implemented.

Organization

GHSP employment is subject to the North Carolina Department of Transportation (DOT) personnel policies and the State Personnel Act. The Governor of North Carolina appoints the Director of the Governor's Highway Safety Program as the official responsible for all aspects of the highway safety program. The Director is the ranking official having authority to administer the highway safety program.

The GHSP is currently staffed with professionals and three support personnel. Administration of the program is the responsibility of the Director. There are three primary sections:
- Planning, Programs and Evaluation
- Finance
- Public Affairs

1. Planning, Programs and Evaluation Section

The function of the Planning, Programs and Evaluation section is to develop, implement, manage, monitor and evaluate a grants program that effectively addresses the highway safety problems that have been identified as a result of a comprehensive analysis of crash, citation and other empirical data. This program is the basis for the annual Highway Safety Plan.

The Planning, Programs and Evaluation section is currently staffed with a Supervisor and four Highway Safety Specialists. Every project is assigned to a specific Highway Safety Specialist. The Highway Safety Specialist is the Project Director's liaison with the GHSP, NHTSA and other highway safety agencies.

2. Finance Section

The function of the Finance section is to manage and coordinate the financial operations of the GHSP. The Finance section is currently staffed with a Finance Officer.

3. Public Affairs Section

The function of the Public Information and Education section is to increase the level of awareness and visibility of highway safety issues and the visibility of the GHSP.

The Public Information and Education section is currently staffed with a Public Affairs Manager and a Special Events Coordinator.

STATE GOALS BY PROGRAM AREA

(A)   North Carolina's goal for occupant protection is to increase safety belt usage through education and enforcement. We will strive to increase our statewide safety belt usage rate from 89.8% to 92% by 2012. In order to achieve this rate, we must realize the following changes.
- Decrease fatalities from non-restraint use from 534 in 2006 to less than 500.
- Increase usage rates among the 16 – 24 year old group.
- Increase the usage rate among the male drivers.

(B)   North Carolina's goal for impaired driving is to reduce the number of alcohol-related crashes, injuries and fatalities. We will strive to decrease alcohol-related crashes as follows:
- Decrease crashes 10% from 365,879 (in 2006) to 329,291 (in 2010)
- Decrease fatalities by 10% from 554 to 499.
- Increase BAC testing of drivers in fatal crashes each year by at least 1%.

(C)   North Carolina's goal for traffic records is to improve the collection and accessibility of traffic records system data to provide enhanced traffic records data to customers and to improve customer service. We will strive to enhance DMV databases to more efficiently capture statewide highway safety data (i.e. traffic crash data) to provide accurate, timely highway safety and traffic crash information.
- Increase the percentage of electronically captured data to include crash data, citation data and emergency medical services.
- Improve the connectivity and exchange of data between partners.

(D)   North Carolina's goal for motorcycle safety is to reduce the fatality rate.   We will strive to decrease the motorcycle fatality and crash rates as follows.
- Decrease number of fatalities from 9.3 fatalities per10,000 m/c registrations in 2006 to 7.5 fatalities per 10,000 m/c registrations in 2010.

(E)   North Carolina's goal for speed is to decrease speed-related crashes in the state. We will strive to decrease the speed-related fatality rate as follows by June, 2008:
- Decrease fatality rate involving speed from 41% to 35%
- Decrease injury rate involving speed from 12% to 10%.

(F)   North Carolina's goal for fatalities is to decrease the mileage death rate to 1.00/vm by 2015. We will strive to reduce the overall number of fatalities to 1,500 by 2012.

PERFORMANCE PLAN

PROBLEM IDENTIFICATION PROCESS

North Carolina's Governor's Highway Safety Office (GHSP) conducts extensive problem identification to develop and implement the most effective and efficient plan for the distribution of federal funds. Problem identification is vital to the success of our highway safety program and ensures that the initiatives implemented address the crash, fatality, and injury problems within the state; provides the appropriate criteria for the designation of funding priorities, and provides a benchmark for administration and evaluation of the overall highway safety plan.

The problem identification conducted resulted in the following actions:

- Collection and analysis of traffic crash data – The GHSP compares prior year HSP data with current year data. From that data, along with additional information, we determine which goals need to be set or remain the same.
- Source of data – North Carolina is fortunate to have a centralized source for all traffic data. This data is collected from the Department of Motor Vehicles (DMV) as well as from NCDOT staff members throughout the state. This data is channeled to the State Traffic Safety Engineer with NCDOT and is readily available to the GHSP and to the public. Additionally GHSP has access to the Fatality Analysis Reporting System (FARS) which is another tool for comparison to the national numbers as to our state's problems. North Carolina has a centralized system of courts administered by the Administrative Office of Courts (AOC) and this enables us to have accurate and up to the minute data available on citations, status of cases and disposition.
- GHSP, in conjunction with a team of partner agencies, utilizes specific locality data/problem identification with other North Carolina data, to plan and implement statewide programs to address our highway safety issues including enforcement and awareness campaigns.

Based on this information, a plan is developed that provides funding priority to:

- Projects that support statewide goals.
- Projects that identify problems by High Risk Areas. High Risk Areas are determined using the following methodology: (1) counties/cities/towns are ranked in terms of their crash severity problem, (3) jurisdictions are stratified by type (i.e. county, city and town). Those jurisdictions with the highest ranking in each category are selected as High Risk Areas. The ranking is computed using crashes, vehicle miles traveled, fatalities, injuries, local licensed drivers, total licensed drivers, alcohol-related crashes, alcohol-related fatalities, alcohol-related injuries, speed-related crashes, speed-related fatalities and speed related injuries.
- Projects that creatively incorporate "alcohol awareness and occupant protection safety".
- Innovative projects with potential statewide applications or ability to transfer to other jurisdictions.
- Projects from state, local and nonprofit organizations that have statewide significance and address the federal program areas under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

SETTING GOALS AND OBJECTIVES

The goals and objectives that will be accomplished utilizing the funds outlined in North Carolina's 2009 Highway Safety Plan/Application for 402 federal highway safety grant funding are based on the GHSP's mission statement, the mission statement of the North Carolina Executive Committee for Highway Safety along with the goals and objectives outlined under federal guidelines.

The GHSP continues to identify, analyze, recommend and implement resolutions for highway safety problems on a statewide basis.

2003 Through 2006 County Rankings

County	2003	2004	2005	2006	County	2003	2004	2005	2006
Robeson	2	1	1	1	Burke	25	38	38	51
Columbus	3	2	3	2	Buncombe	78	71	61	52
Graham	4	5	2	3	Gaston	52	53	49	53
Bladen	8	7	8	4	Henderson	79	75	36	54
Hertford	1	3	3	5	Alleghany	56	46	78	55
Hoke	7	4	5	6	Swain	91	95	67	56
Scotland	23	11	16	7	Catawba	59	52	58	57
Sampson	6	8	6	8	Iredell	60	41	40	58
Wilson	15	17	10	9	Alamance	50	63	58	59
Bertie	12	10	11	10	Wilkes	17	25	61	60
Gates	5	6	7	11	Surry	42	40	43	61
Lenoir	13	15	12	12	Stokes	67	58	55	62
Nash	16	18	18	13	Randolph	68	62	72	63
Beaufort	11	13	9	14	Stanly	84	72	64	63
Lee	20	14	17	15	Pender	44	37	49	65
Harnett	10	12	13	16	Chatham	47	45	36	66
Northampton	18	16	15	17	Rowan	86	81	76	67
Franklin	22	23	23	18	Union	70	63	65	68
Cumberland	36	28	22	19	Cherokee	29	22	46	69
Halifax	28	21	20	20	Pasquotank	82	83	83	70
Richmond	23	9	13	21	Mitchell	92	89	86	71
Johnston	35	26	31	22	Currituck	40	70	78	72
Edgecombe	51	32	30	23	Vance	58	54	67	73
Onslow	43	35	35	24	Tyrrell	54	55	34	74
New Hanover	41	33	25	25	Montgomery	63	73	87	75
Anson	21	27	21	26	Cabarrus	64	69	71	76
Brunswick	34	51	45	27	Pamlico	57	60	84	77
Rutherford	32	44	44	28	Dare	73	67	60	78
Clay	33	29	33	29	Forsyth	75	74	74	79
Greene	26	30	26	30	Caswell	65	79	75	80
Jackson	69	56	52	30	Granville	85	80	89	81
Warren	38	36	32	32	Person	46	61	53	81
Duplin	9	20	19	33	Wake	83	78	81	83
Lincoln	60	68	49	33	Madison	88	82	82	84
Carteret	74	49	57	35	Transylvania	94	90	80	85
Wayne	13	19	29	36	Ashe	71	87	88	86
Caldwell	66	66	54	37	Craven	98	92	85	87
Cleveland	62	65	69	38	Macon	93	93	77	88
Jones	19	57	65	39	Haywood	96	96	94	89
Moore	45	47	42	40	Orange	87	94	92	90
Pitt	31	34	28	41	Hyde	76	100	100	91
Perquimans	77	59	63	42	Davie	90	88	91	92
Martin	30	24	27	43	Avery	99	98	95	93
Davidson	81	77	70	44	Yancey	100	99	98	94
Rockingham	39	39	47	45	Yadkin	95	97	96	95
Mecklenburg	53	48	47	46	Washington	72	85	90	96
Alexander	80	76	56	47	McDowell	55	84	93	97
Guilford	37	43	39	48	Chowan	48	50	73	98
Watauga	27	31	24	49	Camden	97	86	97	99
Durham	49	42	41	50	Polk	89	91	99	100

This ranking of counties is based on several factors including reported crashes, crash severity, and crash rates based on population, registered vehicles and estimated vehicle miles traveled. For a complete listing of factors and data, contact Brian Murphy, PE with the Traffic Safety Systems Management Unit in the Department of Transportation.

2006 Ranking of Cities with Populations of 10,000 or More

Based on All Reported Crashes from January 1, 2004 through December 31, 2006

City	Total Crashes	% Alcohol Related Crashes	Fatal Crashes	Non-Fatal Injury Crashes	2003	Ranking 2004	2005	2006
FAYETTEVILLE	19,771	3.19%	73	5,550	2	2	4	1
WILMINGTON	12,822	4.71%	42	4,644	5	1	1	2
ASHEVILLE	9,006	4.93%	36	3,474	8	2	3	3
CHARLOTTE	89,910	3.53%	194	24,969	4	2	2	4
GASTONIA	11,677	3.47%	22	3,592	3	5	5	5
HICKORY	10,703	2.51%	15	2,218	7	7	10	6
LUMBERTON	4,811	3.18%	15	1,293	6	8	7	7
GREENSBORO	23,973	3.83%	64	8,513	1	5	6	8
MONROE	4,287	4.27%	15	1,286	21	12	12	9
STATESVILLE	2,922	3.66%	14	1,198	25	17	8	10
LEXINGTON	2,534	4.62%	15	891	27	25	17	11
BURLINGTON	5,641	4.84%	15	1,910	9	14	11	12
DURHAM	31,937	2.84%	55	6,513	12	9	9	12
RALEIGH	53,912	3.10%	77	10,359	15	13	16	14
SHELBY	3,057	3.30%	11	935	16	20	23	15
LENOIR	2,430	4.61%	11	725	40	41	27	16
HIGH POINT	7,525	4.92%	26	3,014	13	15	14	17
CONCORD	7,360	3.65%	18	2,190	11	11	13	18
WINSTON-	21,261	4.05%	48	5,996	14	16	20	19
SANFORD	3,607	3.88%	10	842	9	10	14	20
ROCKY MOUNT	8,066	3.10%	12	1,862	16	19	22	21
ASHEBORO	3,028	2.84%	7	921	31	22	18	22
MORGANTON	2,349	3.66%	8	677	19	21	21	23
GREENVILLE	8,549	3.39%	15	2,200	19	18	19	24
SALISBURY	4,647	2.45%	7	1,117	24	32	28	25
KINSTON	1,872	4.65%	8	978	35	27	31	26
MOORESVILLE	3,123	4.26%	6	915	52	43	25	27
HENDERSONVILL	3,072	3.22%	3	776	23	34	30	28
GOLDSBORO	4,095	3.57%	9	1,236	28	24	29	29
KERNERSVILLE	2,446	4.33%	9	714	22	26	24	30
WILSON	6,157	3.20%	11	1,484	18	23	26	31
SOUTHERN	1,225	3.84%	9	419	41	28	32	32
HUNTERSVILLE	3,029	4.26%	13	795	38	45	34	33
LINCOLNTON	1,361	4.48%	5	410	45	44	33	34
MATTHEWS	3,623	2.59%	5	845	32	33	35	35
JACKSONVILLE	6,979	3.91%	9	1,774	29	35	36	36

City	Total Crashes	% Alcohol Related Crashes	Fatal Crashes	Non-Fatal Injury	2003	Ranking 2004	2005	2006
GRAHAM	1,917	4.23%	4	491	53	51	49	37
SMITHFIELD	2,758	3.41%	2	518	30	30	41	38
THOMASVILL	2,539	4.14%	9	632	36	31	36	38
CARY	11,222	2.64%	9	2,116	37	37	40	40
KANNAPOLIS	3,380	3.85%	9	901	34	38	36	41
ALBEMARLE	1,711	3.57%	5	498	44	42	42	42
EDEN	1,177	6.46%	6	422	39	39	43	43
REIDSVILLE	1,282	4.45%	5	374	54	53	50	44
NEW BERN	2,312	3.76%	5	672	58	58	52	45
GARNER	2,570	3.00%	4	675	26	29	39	46
INDIAN TRAIL	1,764	3.12%	6	496	50	46	44	46
MINT HILL	1,080	5.09%	9	270	46	39	46	48
ROANOKE	1,423	3.58%	3	508	43	47	45	48
CHAPEL HILL	3,840	4.40%	6	915	47	49	50	50
HENDERSON	1,511	4.04%	4	434	51	54	54	51
CLEMMONS	1,473	4.01%	5	369	56	54	53	52
BOONE	3,576	3.41%	1	407	49	50	55	53
CLAYTON	1,553	2.96%	2	380	--	52	56	54
ELIZABETH	1,835	4.03%	3	514	48	56	58	55
KINGS	1,311	2.97%	4	217	42	48	47	56
NEWTON	1,322	4.69%	3	324	33	36	48	57
LAURINBURG	656	3.20%	4	332	55	57	56	58
WAKE	1,473	2.85%	3	410	61	60	60	59
APEX	2,059	3.30%	3	501	64	64	62	60
FUQUAY-	1,752	2.23%	1	314		----	59	61
HOPE MILLS	1,167	3.60%	2	320	60	59	61	62
HOLLY	702	4.13%	5	151	62	68	70	63
TARBORO	421	5.94%	2	197	59	63	66	64
LEWISVILLE	546	5.49%	3	148		----	64	65
MORRISVILLE	1,239	2.42%	1	254	--	62	65	66
PINEHURST	824	3.03%	1	260	57	61	63	67
CARRBORO	484	8.68%	1	169	62	65	69	68
HAVELOCK	1,247	4.17%	2	235	66	67	68	69
CORNELIUS	1,127	5.77%	2	211	65	66	67	70
FORT BRAGG	1,159	2.07%	0	234		-----		71

This ranking of cities is based on several factors including reported crashes, crash severity, and crash rates based on population. For a complete listing of factors and data, contact Brian Murphy, PE with the Traffic Safety Systems Management Unit in the Department of Transportation.

2006 Rankings of Cities with Population Less than 10,000

City	Total Crashes	% Alcohol Related Crashes	Fatal Crashes	Non-Fatal Injury Crashes	2003	2004	2005	2006
WHITEVILLE	975	1.85%	2	360	1	1	6	1
CLINTON	1,043	1.82%	7	363	18	16	7	2
WILKESBORO	783	3.19%	3	201	6	2	1	3
WASHINGTON	1,306	2.45%	3	496	8	5	4	4
TRINITY	657	5.94%	6	224	5	9	9	5
NORTH	508	2.76%	2	229	10	10	16	6
FOREST CITY	939	3.19%	4	294	13	7	5	7
MOUNT AIRY	1,028	4.67%	3	387	3	4	3	8
WADESBORO	587	3.07%	2	224	24	27	20	9
MOREHEAD CITY	1,749	3.83%	3	438	4	3	2	10
SHALLOTTE	234	2.56%	1	114	44	42	36	11
PINEVILLE	1,980	3.23%	3	391	15	13	13	12
ABERDEEN	774	3.36%	3	208	7	8	8	13
KITTY HAWK	594	6.06%	2	156	12	19	28	14
AHOSKIE	536	2.24%	3	178	22	12	19	15
LILLINGTON	523	3.44%	3	124	63	23	11	15
ROCKINGHAM	906	3.42%	3	351	27	22	15	17
WALKERTOWN	569	4.75%	2	186	37	15	12	18
PEMBROKE	527	2.66%	2	150	46	21	29	19
DUNN	1,264	2.37%	2	399	14	17	22	20
SYLVA	591	3.38%	1	178	16	11	14	20
ZEBULON	566	4.24%	5	133	128	46	27	22
MADISON	493	1.62%	1	123	65	36	61	23
ARCHDALE	882	3.85%	5	233	115	41	21	24
NAGS HEAD	255	9.80%	2	93	2	6	10	25
RURAL HALL	247	7.69%	3	66	19	38	26	26
CONOVER	1,880	3.78%	1	385	25	24	23	27
SPRING LAKE	1,389	4.68%	2	305	26	31	33	28
LELAND	600	4.50%	2	156	35	30	52	29
WAYNESVILLE	378	5.56%	5	204	169	138	65	30
BELMONT	1,551	4.26%	2	287	53	52	30	31
KILL DEVIL	973	8.32%	1	242	17	14	24	32
LOUISBURG	472	4.03%	1	122	9	20	57	33
BENSON	447	4.03%	3	87	270	96	67	34
WINTERVILLE	541	2.40%	5	135	52	45	38	35
RANDLEMAN	573	4.89%	1	124	97	66	45	36
LOWELL	306	3.59%	1	106	55	40	18	37
SILER CITY	966	4.76%	3	193	66	64	43	38
SELMA	794	4.28%	1	223	78	47	25	39
NEW LONDON	88	4.55%	1	27	33	28	47	40
HILDEBRAN	175	4.00%	1	71	49	33	35	41
BREVARD	702	4.13%	1	208	85	49	43	42
STOKESDALE	313	7.35%	1	115	72	69	37	43
SUMMERFIELD	523	4.59%	2	163	42	51	42	44
WESLEY CHAPEL	298	4.36%	2	103	101	59	48	45
HILLSBOROUGH	541	3.51%	3	124	86	29	31	46
CLARKTON	61	9.84%	1	37	131	75	70	47
STALLINGS	901	4.77%	1	252	58	93	41	48
TROY	272	3.68%	4	80	110	164	102	49
RED SPRINGS	359	4.46%	1	105	135	172	110	50
HAMLET	465	4.52%	1	173	11	17	17	51
WEDDINGTON	603	5.14%	2	179	56	57	72	52
MIDLAND	177	5.65%	2	60	142	70	50	53
OAK RIDGE	320	7.19%	1	105	104	61	48	54
KNIGHTDALE	969	4.02%	1	187	51	54	62	55
DALLAS	641	2.34%	0	172	68	68	58	56
MOUNT HOLLY	890	5.28%	2	225	69	55	76	57
PINEBLUFF	105	4.76%	1	36	80	146	112	58
CANTON	439	3.64%	2	72	81	79	69	59
CLEVELAND	64	4.69%	1	29	205	170	83	59
WENTWORTH	237	4.64%	2	67	122	150	88	61
MOCKSVILLE	418	4.31%	1	111	111	101	85	62
HUDSON	449	2.23%	0	147	36	37	34	63
EMERALD ISLE	347	7.78%	2	58	148	136	81	64
DORTCHES	85	3.53%	1	23	45	81	117	65
WALNUT COVE	146	4.11%	1	38	182	156	124	65
MURPHY	348	5.17%	0	93	21	25	51	67
ROXBORO	1,270	3.15%	0	260	30	32	39	68
JAMESTOWN	317	3.47%	1	83	100	78	53	69
FALLSTON	61	6.56%	1	19	143	119	64	70
RENNERT	26	19.23%	2	13	124	112	206	70
ELKIN	524	1.91%	0	132	27	39	46	72
UNIONVILLE	279	5.38%	3	96	54	67	82	73
LANDIS	270	1.85%	1	70	174	108	121	74
ELLENBORO	45	13.33%	2	12	187	266	214	75
FAIRVIEW	138	5.80%	4	54	232	115	90	76
WILLIAMSTON	293	3.41%	2	108	29	26	40	77
LONG VIEW	291	4.47%	3	73	151	114	84	78
MEBANE	687	2.18%	2	149	114	90	71	79
FRANKLIN	499	2.61%	0	137	48	77	60	80
CHINA GROVE	421	5.23%	1	93	274	355	127	81
WOODFIN	273	8.42%	1	88	147	103	156	82
KING	498	4.62%	2	106	34	35	55	83
WILSONS MILLS	77	7.79%	2	27	70	49	73	83
MARSHVILLE	163	5.52%	2	41	74	92	68	85
MOUNT OLIVE	238	4.62%	1	87	103	126	140	86
MILLS RIVER	244	3.69%	2	84	--	298	166	87
OXFORD	319	6.27%	2	124	102	73	79	88
ERWIN	225	3.11%	1	96	117	147	131	89
CHADBOURN	259	3.86%	0	75	116	106	87	90
MOORESBORO	42	2.38%	0	20	71	134	105	90
RICHLANDS	210	0.95%	1	28	64	83	80	92
BRIDGETON	52	3.85%	0	23	60	44	32	93
ROBBINSVILLE	102	3.92%	0	35	79	95	108	93
PLYMOUTH	123	3.25%	2	59	171	111	122	95
BEAUFORT	567	6.17%	0	112	99	97	99	96
WALLACE	389	3.08%	0	94	41	84	104	97
HARMONY	39	0.00%	1	13	156	58	88	98

City	Total Crashes	% Alcohol Related	Fatal Crashes	Non-Fatal Injury	200(3)	Ranking 2004	2005	2006
AUTRYVILLE	20	10.00%	1	7	175	143	129	99
HARRISBURG	538	2.60%	1	104	31	43	118	10
PEACHLAND	38	5.26%	1	13	288	255	105	10
BRYSON CITY	316	1.90%	0	56	23	60	56	10
ENFIELD	109	10.09%	1	44	211	174	120	10
SPINDALE	173	5.20%	1	76	222	182	159	10
WINDSOR	163	2.45%	1	48	161	154	142	10
WEST JEFFERSON	228	3.51%	0	63	227	176	139	10
ROCKWELL	126	3.97%	1	45	157	86	91	10
HOFFMAN	33	0.00%	1	19	207	194	169	10
WAXHAW	252	6.35%	1	66	279	207	93	10
ROSE HILL	99	4.04%	1	23	215	141	103	11
TAYLORSVILLE	202	3.96%	1	37	50	56	74	11
GROVER	43	18.60%	1	17	233	242	115	11
OAK ISLAND	327	11.01%	2	87	287	177	128	11
YADKINVILLE	419	1.43%	0	84	141	109	95	11
WENDELL	351	4.84%	1	98	253	187	151	11
SIMS	15	13.33%	1	5	429	308	132	11
TOBACCOVILLE	148	10.81%	1	43	123	122	112	11
VALDESE	274	2.19%	2	55	106	99	124	11
BLACK	268	8.21%	1	91	120	102	123	11
ELIZABETHTOWN	352	1.42%	0	103	47	65	59	12
CARTHAGE	223	2.24%	0	62	43	74	66	12
RED CROSS	86	1.16%	0	37	188	160	101	12
RICHFIELD	69	5.80%	0	24	213	155	107	12
HEMBY BRIDGE	135	4.44%	0	42	199	209	165	12
ALLIANCE	72	2.78%	0	33	59	118	134	12
JONESVILLE	223	2.24%	1	39	57	76	114	12
SPRUCE PINE	172	5.23%	0	62	134	119	96	12
RAEFORD	303	2.97%	0	89	73	82	111	12
FRANKLINTON	125	6.40%	1	33	257	185	209	12
STEDMAN	67	2.99%	0	29	76	63	54	13
MAXTON	78	5.13%	1	38	113	180	191	13
NEWPORT	269	6.69%	0	79	210	217	190	13
DUBLIN	30	3.33%	0	12	358	343	273	13
CREEDMOOR	189	4.23%	1	39	293	323	186	13
EDENTON	181	5.52%	1	59	76	80	92	13
COLUMBIA	70	4.29%	0	22	261	248	154	13
DOBSON	215	3.26%	0	39	201	205	215	13
NORMAN	18	16.67%	0	8	309	285	302	13
FLETCHER	334	2.99%	0	77	206	202	163	13
ANGIER	325	4.31%	0	91	183	171	153	14
CHOCOWINITY	66	1.52%	0	26	93	148	146	14
HOLLY RIDGE	44	4.55%	2	9	126	105	157	14
MAIDEN	180	5.00%	1	36	105	128	86	14
WARSAW	132	6.06%	0	67	162	157	176	14
LUMBER BRIDGE	68	1.47%	0	18	61	72	77	14
RUTHERFORDTON	326	2.15%	0	82	40	47	78	14
DENTON	121	3.31%	0	40	90	145	144	14

City	Total Crashes	% Alcohol Related	Fatal	Non-Fatal Injury	2003	Ranking 2004	2005	2006
ARAPAHOE	19	10.53%	1	7	339	364	368	148
SEDALIA	27	11.11%	1	11	176	161	147	149
CAROLINA BEACH	428	8.64%	0	90	166	203	155	150
PLEASANT	161	3.11%	1	65	137	113	97	151
MOUNT PLEASANT	103	2.91%	0	29	165	142	119	152
HARRELLS	33	0.00%	0	15	67	53	63	153
ELLERBE	79	2.53%	0	34	228	264	162	154
BLOWING ROCK	268	4.85%	0	29	145	136	148	155
BUNN	49	0.00%	0	21	150	124	152	156
RHODHISS	33	3.03%	1	13	236	125	143	157
BUTNER	214	5.14%	1	52	132	196	219	158
LUCAMA	26	11.54%	2	6	357	219	206	159
BEULAVILLE	137	2.92%	0	28	173	148	109	160
TABOR CITY	141	9.22%	0	54	315	245	161	161
ELON COLLEGE	255	7.06%	1	67	204	208	158	162
NEWLAND	131	0.76%	0	24	427	399	135	163
RAMSEUR	101	6.93%	0	40	180	177	210	163
COFIELD	14	21.43%	1	6	220	357	164	165
FARMVILLE	411	3.41%	0	82	164	133	116	166
MARION	328	3.05%	1	71	118	87	98	167
PILOT MOUNTAIN	124	2.42%	0	31	153	140	130	168
RUTHERFORD	61	6.56%	0	27	198	192	198	169
CLAREMONT	173	4.62%	0	29	92	98	170	170
LAKE LURE	55	9.09%	0	24	87	104	137	171
CHERRYVILLE	399	4.51%	0	90	178	179	172	172
SOUTHPORT	156	5.13%	1	30	329	312	175	173
WEAVERVILLE	251	4.78%	0	45	257	197	160	174
BURGAW	177	4.52%	0	54	275	253	183	175
MANTEO	184	4.35%	0	27	125	116	133	175
CONNELLY	45	4.44%	1	20	248	194	211	177
LEWISTON	16	12.50%	2	5	138	130	136	178
BOILING SPRING	158	5.06%	0	58	195	260	195	179
STOVALL	29	10.34%	0	13	390	292	223	179
HIGH SHOALS	23	17.39%	1	10	349	336	384	181
WRIGHTSVILLE	283	8.83%	0	44	170	164	167	182
EAST SPENCER	84	4.76%	0	27	178	188	220	183
COMO	10	0.00%	0	4	251	159	179	184
HAW RIVER	115	4.35%	0	34	38	162	193	185
BOGUE	12	0.00%	1	7	208	299	186	186
OLD FORT	57	5.26%	0	18	303	280	227	187
TROUTMAN	107	3.74%	0	38	202	201	168	188
POLKTON	117	4.27%	0	40	95	84	99	189
SHANNON	21	9.52%	0	11	219	185	231	190
BESSEMER CITY	198	6.06%	0	70	244	277	212	191
CRAMERTON	143	4.90%	0	44	249	249	230	192
ROPER	28	3.57%	0	17	289	235	199	193
BISCOE	166	1.81%	0	27	81	88	181	194
RICH SQUARE	43	2.33%	1	8	353	200	177	194
BELWOOD	47	12.77%	0	22	228	210	228	196

City	Total Crashes	% Alcohol Related	Fatal Crashes	Non-Fatal Injury Crashes	2003	Ranking 2004	2005	2006	City	Total Crashes	% Alcohol Related	Fatal Crashes	Non-Fatal Injury Crashes	2003	Ranking 2004	2005	2006
POWELLSVILLE	20	10.00%	0	13	291	213	174	197	GREEN LEVEL	31	9.68%	1	9	307	232	242	246
MINERAL	89	6.74%	0	31	140	100	189	198	FAISON	29	6.90%	0	12	272	376	354	247
SCOTLAND NECK	94	4.26%	0	30	241	212	197	199	WHITAKERS	17	5.88%	1	2	327	190	226	248
GRANTSBORO	76	3.95%	0	23	108	110	144	200	RUTH	28	3.57%	0	10	302	279	218	249
NORTH TOPSAIL	86	9.30%	0	13	158	237	270	201	FOUR OAKS	20	0.00%	1	7	340	373	241	250
BAYBORO	54	3.70%	0	16	155	175	185	202	MAGGIE VALLEY	32	3.13%	0	15	127	139	193	251
WHITE LAKE	40	17.50%	0	14	196	206	184	203	CEDAR POINT	66	10.61%	0	16	136	237	224	252
PITTSBORO	264	1.14%	0	34	83	127	170	204	STANTONSBURG	11	0.00%	1	2	445	454	446	253
SPARTA	117	4.27%	0	27	144	181	253	205	YOUNGSVILLE	110	7.27%	0	11	84	173	246	254
SOUTHERN	100	7.00%	1	22	410	339	320	206	SNOW HILL	61	1.64%	0	23	129	183	255	255
GIBSONVILLE	154	6.49%	0	43	242	241	262	207	SPENCER	121	8.26%	0	30	342	338	281	256
SUNSET BEACH	117	4.27%	1	17	350	327	306	208	BAKERSVILLE	38	0.00%	0	9	374	250	245	257
MCADENVILLE	44	6.82%	0	18	185	144	265	209	KENLY	147	2.72%	0	16	377	361	324	258
LILESVILLE	30	3.33%	0	11	119	91	94	210	LINDEN	10	10.00%	0	6	267	382	287	258
GRIMESLAND	43	2.33%	0	15	231	257	233	211	SANDY CREEK	4	0.00%	1	1		------		260
TURKEY	25	4.00%	0	12	281	220	213	212	GRIFTON	58	5.17%	0	22	363	313	264	261
TAR HEEL	13	0.00%	0	6	193	183	179	213	BOLIVIA	24	4.17%	0	6	327	294	288	262
SWANSBORO	189	2.65%	0	26	269	283	267	214	EARL	13	7.69%	0	4	335	233	243	263
DUCK	76	3.95%	0	14	255	228	141	215	CHIMNEY ROCK	8	0.00%	0	4	167	121	137	264
GRANITE FALLS	137	5.84%	0	49	89	117	181	216	SURF CITY	8	12.50%	1	3	152	129	282	265
WINGATE	81	3.70%	0	25	190	204	203	216	NASHVILLE	114	5.26%	0	28	217	223	379	266
MARVIN	66	7.58%	1	16	192	168	178	218	EAST ARCADIA	25	0.00%	0	7	280	240	237	267
LOCUST	197	1.02%	0	32	237	261	229	219	BOILING SPRINGS	81	3.70%	1	14	395	447	441	268
CATAWBA	49	6.12%	0	14	239	230	208	220	ROWLAND	69	5.80%	0	17	265	226	205	269
MURFREESBORO	107	6.54%	0	37	109	225	240	221	WINTON	26	3.85%	0	12	424	402	338	270
POLKVILLE	30	0.00%	0	11	314	229	188	222	GLEN ALPINE	32	6.25%	0	8	121	151	150	271
BOARDMAN	13	15.38%	0	5	298	247	236	223	STONEWALL	21	0.00%	0	8	189	193	224	271
AURORA	15	6.67%	1	3	278	367	405	224	RONDA	36	2.78%	0	10	372	324	265	273
WHITSETT	63	12.70%	0	16	296	273	251	224	YANCEYVILLE	97	4.12%	0	24	184	218	378	273
GARYSBURG	53	3.77%	0	18	132	189	217	226	LANSING	11	0.00%	0	5	354	383	285	275
HALIFAX	35	0.00%	0	11	306	258	238	227	PIKEVILLE	35	0.00%	0	13	163	246	283	276
PATTERSON	35	2.86%	0	16	130	153	204	228	PRINCEVILLE	31	6.45%	0	13	203	163	258	277
DANBURY	25	8.00%	0	6	90	94	239	229	NEWTON GROVE	38	15.79%	0	12	168	341	297	278
JEFFERSON	153	3.92%	0	20	412	416	353	230	HERTFORD	83	4.82%	0	18	172	158	269	279
STALEY	18	5.56%	0	8	383	288	263	230	WINFALL	31	0.00%	0	11	97	132	253	279
BETHANIA	25	8.00%	0	7	271	277	202	232	OCEAN ISLE	72	2.78%	0	7	191	198	221	281
BOSTIC	24	8.33%	0	11	285	254	216	233	KENANSVILLE	61	0.00%	0	17	359	330	280	282
SEAGROVE	29	10.34%	0	9	266	289	234	234	ANDREWS	94	6.38%	0	20	74	71	75	283
CALABASH	119	7.56%	0	22	273	275	268	235	DAVIDSON	161	6.21%	0	46	212	256	272	284
CAPE CARTERET	59	6.78%	0	19	139	235	201	236	BROOKFORD	17	5.88%	0	9	160	151	291	285
ATLANTIC BEACH	242	7.85%	0	13	321	290	261	237	GODWIN	6	0.00%	0	4	308	263	275	286
BELVILLE	40	7.50%	0	12	62	211	192	238	WACO	24	8.33%	0	8	276	268	256	287
GASTON	40	2.50%	0	15	95	89	124	238	FALKLAND	13	7.69%	0	4	226	231	172	288
SALEMBURG	23	0.00%	0	9	367	369	346	240	CAMERON	27	3.70%	0	7	348	283	293	289
ALAMANCE	33	12.12%	0	10	337	305	252	241	CALYPSO	13	7.69%	0	6	181	134	244	290
NORWOOD	119	4.20%	0	30	225	250	247	242	PELETIER	9	11.11%	0	6	394	350	360	291
LEGGETT	10	0.00%	0	4	351	297	259	243	LIBERTY	87	5.75%	0	25	313	318	298	292
SHARPSBURG	61	6.56%	0	22	220	199	200	244	BLADENBORO	42	9.52%	0	13	379	397	319	293
ROLESVILLE	132	4.55%	0	23	284	305	249	245	SPRING HOPE	38	2.63%	0	11	177	286	294	294

City	Total Crashes	% Alcohol Related	Fatal Crashes	Non-Fatal Injury Crashes	2003	Ranking 2004	2005	2006
CASAR	17	11.76%	0	7	112	107	279	295
COLERAIN	6	16.67%	0	2	388	443	333	296
GATESVILLE	16	0.00%	0	3	224	234	235	297
AYDEN	76	3.95%	0	23	282	310	289	298
ELK PARK	27	3.70%	0	9	396	392	359	299
HAYESVILLE	29	0.00%	0	9	333	345	357	300
POLLOCKSVILLE	10	0.00%	0	6	292	329	290	301
ARLINGTON	1	0.00%	1	0	----			302
KURE BEACH	53	11.32%	0	13	399	359	332	302
BAILEY	70	2.86%	0	8	304	342	331	304
GRANITE QUARRY	64	1.56%	0	21	297	313	296	305
KELFORD	11	0.00%	0	6	234	271	222	305
VANCEBORO	26	3.85%	0	8	310	301	277	307
VASS	51	3.92%	0	11	107	131	286	308
WOODLAND	33	15.15%	0	12	401	358	310	309
CASTALIA	15	6.67%	0	4	407	293	276	310
BEECH	43	9.30%	0	5	301	267	248	311
MARS HILL	76	1.32%	0	13	299	309	305	312
RED OAK	85	5.88%	0	22	197	304	301	313
CERRO GORDO	9	0.00%	0	6	251	262	249	314
STANLEY	57	5.26%	0	16	440	442	444	315
RIVER BEND	25	4.00%	0	11	324	315	309	316
ROSEBORO	20	10.00%	0	10	361	302	347	317
BERMUDA RUN	50	4.00%	0	10	422	410	355	318
ANSONVILLE	28	0.00%	0	9	186	216	361	319
BELHAVEN	63	4.76%	0	16	228	215	260	320
FRANKLINVILLE	44	15.91%	0	14	222	244	270	321
FAIRMONT	102	4.90%	0	17	326	316	453	322
SAINT JAMES	39	2.56%	0	15	356	348	375	323
PANTEGO	7	0.00%	0	4	345	366	327	324
COVE CITY	14	0.00%	0	7	312	252	295	325
CENTERVILLE	7	0.00%	0	3	317	222	330	326
MOUNT GILEAD	38	5.26%	0	13	218	190	315	327
LA GRANGE	52	1.92%	0	18	366	332	307	328
TRYON	36	8.33%	0	14	316	287	316	329
BRUNSWICK	15	13.33%	0	8	209	378	316	330
SEABOARD	16	12.50%	0	5	409	406	348	331
ELM CITY	25	0.00%	0	12	319	320	312	332
MICRO	11	9.09%	0	4	300	347	399	333
CROSSNORE	12	8.33%	0	2	343	290	302	334
FAITH	28	7.14%	0	9	243	276	321	335
SWEPSONVILLE	30	0.00%	0	10	334	322	325	336
CULLOWHEE	5	20.00%	1	1	466	462	458	337
WADE	22	0.00%	0	7	330	307	326	338
GIBSON	13	15.38%	0	7	378	311	300	339
FREMONT	55	0.00%	0	11	405	377	337	340
STONEVILLE	27	3.70%	0	5	295	353	328	340
BOLTON	22	9.09%	0	7	238	221	232	342
MAYSVILLE	20	5.00%	0	10	250	319	341	343

City	Total Crashes	% Alcohol Related	Fatal Crashes	Non-Fatal Injury Crashes	2003	Ranking 2004	2005	2006
SEVEN SPRINGS	4	25.00%	0	2	421	363	350	344
HOT SPRINGS	14	0.00%	0	4	194	227	311	345
TRENTON	19	5.26%	0	4	153	169	149	346
MCFARLAN	7	0.00%	0	2	146	167	394	347
SANDYFIELD	7	14.29%	0	5	380	380	356	348
DOBBINS HEIGHTS	16	6.25%	0	9	247	352	363	349
NAVASSA	28	7.14%	0	11	344	340	345	350
OAKBORO	46	0.00%	0	9	351	375	342	351
CRESWELL	8	0.00%	0	4	259	300	257	352
WHISPERING PINES	40	7.50%	0	7	331	391	364	353
VARNAMTOWN	11	9.09%	0	3	368	362	299	354
INDIAN BEACH	9	11.11%	0	2	240	272	278	355
JAMESVILLE	22	0.00%	0	6	214	243	406	356
COATS	40	10.00%	0	12	332	365	329	357
AULANDER	22	13.64%	0	8	404	356	371	358
STEM	21	9.52%	0	3	282	281	362	358
LATTIMORE	10	10.00%	0	5	389	405	365	360
FALCON	23	8.70%	0	4	322	317	336	361
EAST BEND	29	3.45%	0	6	355	296	323	362
WAGRAM	15	0.00%	0	7	346	321	338	363
WASHINGTON	7	14.29%	0	2	384	387	443	364
SPENCER	4	25.00%	0	1	244	381	377	365
TOPSAIL BEACH	8	0.00%	0	2	451	427	418	366
PINK HILL	20	5.00%	0	6	337	349	334	367
PARKTON	18	0.00%	0	6	365	451	421	368
COLUMBUS	36	0.00%	0	7	260	281	340	369
SEVEN LAKES	11	9.09%	0	5	469	465	370	370
HAMILTON	12	0.00%	0	5	235	395	385	371
SAINT PAULS	21	9.52%	0	9	423	396	380	372
MESIC	5	20.00%	0	3	311	409	392	373
LAWNDALE	29	10.34%	0	5	199	265	366	374
BILTMORE FOREST	24	4.17%	0	8	376	334	349	375
STANFIELD	26	0.00%	0	8	385	374	372	376
OAK CITY	10	10.00%	0	4	360	351	343	377
TAYLORTOWN	40	2.50%	0	5	341	325	375	378
PARMELE	5	0.00%	0	3	463	438	430	379
GARLAND	16	12.50%	0	6	317	331	316	380
PINE KNOLL	37	5.41%	0	8	393	385	397	380
CAROLINA SHORES	30	10.00%	0	9	290	303	322	382
ROXOBEL	9	11.11%	0	3	294	295	313	383
KITTRELL	6	0.00%	0	2	149	166	196	384
ROSMAN	18	0.00%	0	5	403	379	388	384
ROBERSONVILLE	12	8.33%	0	6	415	389	383	386
BATH	6	0.00%	0	3	268	328	369	387
HOOKERTON	9	11.11%	0	4	439	393	393	388
SPEED	3	0.00%	0	1	159	214	274	389
EVERETTS	6	0.00%	0	2	391	446	400	390
EAST LAURINBURG	8	0.00%	0	3	254	270	284	391
MACON	1	0.00%	0	1	465	464	387	392

City	Total Crashes	% Alcohol Related Crashes	Fatal Crashes	Non-Fatal Injury Crashes	2003	Ranking 2004	2005	2006	City	Total Crashes	% Alcohol Related Crashes	Fatal Crashes	Non-Fatal Injury Crashes	2003	Ranking 2004	2005	2006
CANDOR	22	4.55%	0	5	286	259	351	393	CLYDE	13	0.00%	0	3	375	371	389	432
HARRELLSVILL	2	0.00%	0	1	420	407	394	394	TRENT WOODS	22	4.55%	0	3	382	384	414	433
RAYNHAM	1	0.00%	0	1	392	388	351	395	MARSHALL	6	0.00%	0	2	446	460	450	434
MORVEN	16	12.50%	0	4	216	224	381	396	ORIENTAL	19	0.00%	0	1	464	452	423	435
SALUDA	6	0.00%	0	3	457	425	412	397	MISENHEIMER	10	0.00%	0	2	--	453	428	436
EUREKA	6	0.00%	0	2	415	359	373	398	COOLEEMEE	13	0.00%	0	2	369	370	367	437
HIGHLANDS	33	0.00%	0	3	262	274	314	399	MACCLESFIELD	12	0.00%	0	1	411	418	407	437
CONWAY	10	10.00%	0	4	264	407	396	400	LAKE PARK	21	9.52%	0	2	456	434	425	439
SIMPSON	6	0.00%	0	3	413	401	382	401	DREXEL	16	0.00%	0	2	447	428	431	440
LAKE	8	0.00%	0	4	417	403	398	402	MOMEYER	8	0.00%	0	1	323	326	442	441
JACKSON	13	0.00%	0	4	459	441	432	403	BADIN	8	12.50%	0	2	418	400	410	442
MILTON	2	0.00%	0	1	386	415	404	404	SEVEN DEVILS	6	0.00%	0	0	442	445	451	443
ATKINSON	11	9.09%	0	2	402	436	402	405	MCLEANSVILL	3	0.00%	0	1	441	417	420	444
MAGNOLIA	13	7.69%	0	4	255	337	374	406	KINGSTOWN	3	0.00%	0	1	442	437	448	445
LAUREL PARK	9	11.11%	0	4	426	412	402	407	DOVER	7	0.00%	0	1	430	426	445	446
LITTLETON	8	0.00%	0	3	263	335	390	408	MONTREAT	4	25.00%	0	1	460	468	424	447
GOLDSTON	10	20.00%	0	2	370	344	386	409	HARKERS	3	0.00%	0	1		------		448
WATHA	1	0.00%	0	1		-----		410	BETHEL	3	0.00%	0	1	471	470	463	449
NORTHWEST	8	0.00%	0	3	371	368	358	411	ORRUM	3	0.00%	0	0	414	404	434	450
TEACHEY	8	0.00%	0	2	246	239	308	412	MAYODAN	11	0.00%	0	1	362	354	415	451
SUGAR	1	0.00%	0	1	277	269	304	413	WARRENTON	4	0.00%	0	1	397	450	449	451
BANNER ELK	10	20.00%	0	3	93	123	292	414	BOONVILLE	4	0.00%	0	1	436	429	437	453
ROBBINS	9	11.11%	0	3	364	390	391	415	FLAT ROCK	7	0.00%	0	1	320	435	452	454
MARIETTA	2	0.00%	0	1	400	458	456	416	ICARD	8	0.00%	0	1	453	447	439	455
MIDDLESEX	4	0.00%	0	2	448	432	409	417	ASKEWVILLE	3	0.00%	0	0	435	413	462	456
PRINCETON	4	0.00%	0	2	461	455	422	418	VANDEMERE	4	0.00%	0	0	437	459	454	457
MIDDLEBURG	2	0.00%	0	1	438	424	426	419	LOVE VALLEY	1	0.00%	0	0	462	455	447	458
SARATOGA	6	0.00%	0	2	450	449	411	420	WALSTONBUR	3	0.00%	0	0	347	444	457	459
HOBGOOD	6	0.00%	0	2	433	421	408	421	PINETOPS	5	0.00%	0	0	406	411	429	460
CONETOE	7	14.29%	0	2	305	333	343	422	SEVERN	2	0.00%	0	0	449	431	433	461
FOUNTAIN	14	7.14%	0	2	325	346	335	423	BROADWAY	3	0.00%	0	0	434	440	435	462
BURNSVILLE	4	25.00%	0	2	419	398	413	424	BALD HEAD	1	0.00%	0	0	336	439	437	463
FOXFIRE	5	0.00%	0	2	--	467	417	424	DILLSBORO	1	0.00%	0	0		------		464
FAIR BLUFF	4	0.00%	0	2	454	422	401	426	HOLDEN	2	100.00%	0	0	431	457	459	465
BLACK CREEK	5	0.00%	0	2	458	433	427	427	IVANHOE	1	0.00%	0	0		------		466
STAR	1	0.00%	0	1	398	423	416	428	MINNESOTT	1	0.00%	0	0	372	385	460	467
RANLO	1	0.00%	0	1	428	414	418	429	PINE LEVEL	2	0.00%	0	0	408	420	436	468
NORLINA	1	0.00%	0	1		-----		430	SNEADS FERRY	1	0.00%	0	0		------		469
WELDON	12	8.33%	0	3	425	430	439	431									

This ranking of cities is based on several factors including reported crashes, crash severity, and crash rates based on population. For a complete listing of factors and data, contact Brian Murphy, PE with the Traffic Safety Systems Management Unit in the Department of Transportation.

HIGHWAY SAFETY PLAN

A sampling of the various projects for 2009 and their descriptions can be found in the *Appendix.* These are only a small number of the approximately 100 projects currently being worked on for 2009 but they are representative of the uses of the various types of funding available to North Carolina in 2009. (402, 405, 410, 2011, 2010, 408 and 406)

PROBLEM ID SUMMARY

The objective of this report is to help this agency in the identification of safety problems within the state. This section gives an overview of the frequency and severity of crashes in North Carolina during the last several years. In the subsequent sections, the following areas that are of interest to GHSP are discussed in more detail:

- Alcohol related crashes

- Young driver crashes

- Motorcycle crashes

- Pedestrian crashes

- Bicycle crashes

- Older driver crashes

- Speed-related crashes

- Occupant restraint usage

- Commercial Motor Vehicles

Fatalities and Fatality Rates

The fatality rates in North Carolina and Nation during the last several years are presented in Table 1.1. Fatality rates for the nation were obtained from the Fatality Analysis Reporting System (FARS) (http://www-fars.nhtsa.dot.gov/). For North Carolina, the number of fatalities in 2006 was obtained from NCDOT. Exposure (i.e., miles traveled) for 2006 was obtained from NCDOT. Data for the prior years for North Carolina were taken from the *North Carolina Traffic Crash Facts* report.

Table 1.1: *Fatalities and fatality rates*

Year	National Rate (per 100 MVM)	NC Rate (per 100 MVM)	NC Fatalities
1966	5.50	6.78	1724
1967	5.26	6.57	1751
2000	1.53	1.75	1563
2001	1.51	1.67	1530
2002	1.50	1.68	1573
2003	1.48	1.63	1525
2004	1.46	1.62	1557
2005	1.47	1.53	1546
2006	1.41	1.53	1559

Data used for this chart for VMT is as follows: 2003 – 93,558 MVM; 2004 – 96,111 MVM; 2005 – 100,861 MVM and 2006 – 101,648 MVM. These numbers are from NCDOT and FARS.

Frequency and Severity of Crashes during the Last 3 Years

Table 1.2 shows the frequency and severity of crashes in North Carolina during the last 3 years. The number of injury crashes does not seem to have changed significantly during the last 3 years, but the number of property damage only crashes (PDO) has increased significantly while the number of fatal crashes has actually decreased. This would indicate that the fatal crashes may be decreasing but the number of fatalities per crash is leveling off for the present.

Table 1.2: Crash Frequency and Severity in North Carolina

Severity	Jan 04 – Dec 04	Jan 05 – Dec 05	Jan 06 – Dec 06
	Number	Number	Number
PDO	145,774	287,261	284,562
Injury	83,044	83,135	80,304
Fatal	1,423	1,018	1,013
TOTAL	**230,241**	**371,414**	**365,879**

Table 1.3 shows the number of crashes, number of injury and fatal crashes, crash rate, and the rate of injury and fatal crashes for all 100 counties in North Carolina. The table also highlights the 25 counties that have the highest crash rates, high rate of injury and fatal crashes, and high frequency of total crashes, and a high frequency of total injury and fatal crashes.

Table 1.3	County Rates for All, Injury/Fatal Crashes			
County	Total Crashes	per 1000 Pop	Injury/Fatal Crash	per 1000 Pop
		Crash Rate	Total Number of	Crash Rate
ALAMANCE	**6036**	**43.2**	**1346**	**9.6**
ALEXANDER	803	22.1	201	5.5
ALLEGHANY	317	28.8	99	9.0
ANSON	897	35.4	204	8.0
ASHE	893	34.6	212	8.2
AVERY	491	27.0	123	6.8
BEAUFORT	1665	35.9	426	9.2
BERTIE	626	32.3	217	11.2
BLADEN	1164	35.4	441	13.4
BRUNSWICK	3473	36.6	887	9.3
BUNCOMBE	**9150**	**41.3**	**2125**	**9.6**
BURKE	3274	36.9	825	9.3
CABARRUS	**7226**	**46.0**	**1396**	**8.9**
CALDWELL	2657	33.5	651	8.2
CAMDEN	198	21.3	51	5.5
CARTERET	2366	37.2	552	8.7
CASWELL	514	21.8	131	5.6
CATAWBA	**7464**	**49.4**	**1643**	**10.9**
CHATHAM	1722	29.8	358	6.2
CHEROKEE	649	24.3	195	7.3
CHOWAN	289	19.7	72	4.9
CLAY	238	23.5	82	8.1
CLEVELAND	3626	37.5	837	8.7
COLUMBUS	2112	38.6	739	13.5
CRAVEN	3112	32.6	658	6.9
CUMBERLAND	**13658**	**44.6**	**2588**	**8.4**

CURRITUCK	567	24.0	166	7.0
DARE	1382	39.8	227	6.5
DAVIDSON	5554	35.8	1487	9.6
DAVIE	1295	32.5	281	7.1
DUPLIN	2020	38.3	493	9.4
DURHAM	**13779**	**55.8**	**2385**	**9.7**
EDGECOMBE	1712	32.5	455	8.6
FORSYTH	**14113**	**42.5**	**2880**	**8.7**
FRANKLIN	1603	29.0	443	8.0
GASTON	**8787**	**44.6**	**2218**	**11.2**
GATES	334	28.9	110	9.5
GRAHAM	270	33.3	142	17.5
GRANVILLE	1266	23.5	336	6.2
GREENE	608	29.2	167	8.0
GUILFORD	**19737**	**44.0**	**4357**	**9.7**
HALIFAX	1838	33.1	494	8.9
HARNETT	3088	29.8	891	8.6
HAYWOOD	1718	30.3	429	7.6
HENDERSON	**4214**	**42.1**	**805**	**8.0**
HERTFORD	710	29.7	234	9.8
HOKE	1042	24.7	386	9.1
HYDE	143	25.9	33	6.0
IREDELL	**6486**	**44.7**	**1547**	**10.7**
JACKSON	1348	37.1	352	9.7
JOHNSTON	**6068**	**40.0**	**1436**	**9.5**
JONES	404	39.2	119	11.5
LEE	**2638**	**47.7**	**536**	**9.7**
LENOIR	2243	38.6	740	12.7
LINCOLN	2607	36.6	622	8.7
MACON	902	20.7	240	5.5
MADISON	425	12.8	102	3.1
MARTIN	728	35.6	198	9.7
MCDOWELL	**1013**	**41.5**	**310**	**12.7**
MECKLENBURG	**43245**	**52.3**	**8458**	**10.2**
MITCHELL	477	30.0	124	7.8
MONTGOMERY	676	24.6	162	5.9
MOORE	2835	34.5	728	8.8
NASH	**3842**	**41.7**	**978**	**10.6**
NEW HANOVER	**9904**	**53.8**	**2175**	**11.8**
NORTHAMPTON	580	26.9	192	8.9
ONSLOW	**6447**	**40.0**	**1325**	**8.2**
ORANGE	4566	36.9	769	6.2
PAMLICO	361	27.6	85	6.5
PASQUOTANK	1383	34.6	338	8.5
PENDER	1810	37.1	434	8.9
PERQUIMANS	**1201**	**96.4**	**73**	**5.9**
PERSON	1201	32.1	295	7.9
PITT	**7288**	**49.8**	**1474**	**10.1**
POLK	449	23.5	96	5.0
RANDOLPH	4973	35.9	1103	8.0
RICHMOND	1508	32.3	489	10.5
ROBESON	**5470**	**42.4**	**1664**	**12.9**
ROCKINGHAM	2968	32.3	787	8.6
ROWAN	**5360**	**39.8**	**1113**	**8.3**

RUTHERFORD	1825	28.9	551	8.7
SAMPSON	2139	33.4	645	10.1
SCOTLAND	934	25.2	378	10.2
STANLY	1737	29.4	478	8.1
STOKES	1213	26.2	311	6.7
SURRY	2463	33.7	603	8.3
SWAIN	294	21.1	108	7.7
TRANSYLVANIA	809	26.7	202	6.7
TYRRELL	136	32.0	22	5.2
UNION	6717	39.0	1371	8.0
VANCE	1620	36.9	366	8.3
WAKE	**41283**	**52.3**	**6710**	**8.5**
WARREN	393	19.7	102	5.1
WASHINGTON	342	25.6	81	6.1
WATAUGA	**2200**	**50.7**	**391**	**9.0**
WAYNE	4085	35.5	961	8.4
WILKES	2135	31.9	608	9.1
WILSON	**3252**	**42.0**	**822**	**10.6**
YADKIN	1043	27.6	265	7.0
YANCEY	397	21.6	105	5.7
TOTAL	**365,879**	**41.3**	**81,317**	**9.2**

2. ALCOHOL-INVOLVED CRASHES

Driving after drinking continues to be one of the major causes of motor vehicle crashes in North Carolina as well as the U.S. as a whole. As shown in Table 2.A, both the total number of drinking drivers in crashes and the percent of all crash-involved drivers who had been drinking have remained somewhat steady over the last four years with a slight decrease in 2004 and 2005 as compared to 2001. Unfortunately 2006 shows a slight upward movement to the highest level in the last five years.

Table 2.A: *Number and percentage of drivers involved in crashes judged to have been drinking- by year.*			
	Number of Drinking Drivers	Total Driver Crashes	Percent of Drinking Drivers
Oct 2001 - Sep 2002	12,952	372,426	3.48%
Oct 2002 - Sep 2003	10,944	384,447	2.85%
Jan 2004 - Dec 2004	11,376	381,183	2.98%
Jan 2005 - Dec 2005	10,986	371,414	2.96%
Jan 2006 - Dec 2006	13,390	365,879	3.66%

Demographic Difference in Alcohol Use by Drivers

Driver Age
Alcohol use is strongly related to age and that is also seen in drinking by crash-involved drivers. The very youngest drivers have very low levels of alcohol use, but the prevalence of drinking among crash-involved drivers increases sharply with each year of age to a peak among the 21-24 year-old age group. As is seen in Table 2.B, the likelihood a crash-involved driver has been drinking drops again by age 25 and then declines until reaching a stable, relatively low level among drivers 60 and older.

Table 2.B	Table of Age of Driver				
	Driver Alcohol Assessment				
	No Alcohol		Alcohol		
Age	Number	Percentage	Number	Percentage	Total
Under 16	1039	97.10%	31	2.90%	1,070
16-17	19168	98.68%	256	1.32%	19,424
18-20	37530	96.43%	1,389	3.57%	38,919
21-24	42449	94.98%	2,244	5.02%	44,693
25-29	42167	95.19%	2,132	4.81%	44,299
30-39	72493	96.09%	2,947	3.91%	75,440
40-49	63097	96.34%	2,395	3.66%	65,492
50-59	45347	97.25%	1,281	2.75%	46,628
60 and Above	42579	98.23%	767	1.77%	43,346
Unknown	10	83.33%	2	16.67%	12
TOTAL	**365,879**	**96.47%**	**13,390**	**3.53%**	**379,269**

Race/Ethnicity
The use of alcohol varies substantially within the various subcultures in North Carolina and this is also apparent in the involvement of alcohol in crashes. Table 2.C shows the percent of crash-involved drivers who had been drinking by race/ethnicity. The most striking finding is the extremely high rate of drinking by Hispanic/Latino drivers. This is out of line with national data which consistently show that Native Americans have the highest rates of driving after drinking and that Hispanic/Latino rates fall in between those of Native Americans and whites.

Table 2.C	Table of Race of Driver				
	Driver Alcohol Assessment				
	No Alcohol		Alcohol		
Race	Number	Percentage	Number	Percentage	Total
White	236,801	97.08%	7,126	2.92%	243,927
Black	84,767	97.68%	2,012	2.32%	86,779
Native American	2,719	96.32%	104	3.68%	2,823
Hispanic	21,519	93.28%	1,551	6.72%	23,070
Asian	4,096	98.87%	47	1.13%	4,143
Other	3,451	98.35%	58	1.65%	3,509
Unknown	1,581	97.11%	47	2.89%	1,628
Total	**354,934**	**97.01%**	**10,945**	**2.99%**	**365,879**

The explanation for the abnormally high rate among Hispanic drivers in North Carolina lies in the nature of this population subgroup. Unlike Hispanics in most other regions of the U.S., the North Carolina Latino population is composed mostly of first generation immigrants, a large number of whom have come to the state in the past decade. As such this group is largely male and young – the primary group of drinking drivers among all racial/ethnic groups. Forty-nine percent of Hispanic drivers in crashes were 20 – 29 years old, compared to 26% of blacks and 21% of whites. Thus, whereas white and black crash-involved drivers include many older drivers who are less likely to drink and drive, Hispanic drivers are mostly young males (only 2% of Hispanic drinking driver crashes were females whereas 26% of black and white drinking drivers were females).

Table 2.D	Percent of Crash-Involved Drivers Who Had been Drinking							
	By Race/Ethnicity and Age (Jan 2006 through Dec 2006)							
	White	Black	Nat Amer	Hispanic	Asian	Other	Unknown	**Totals**
15-20	2.47%	1.36%	2.95%	5.81%	1.11%	1.53%	1.38%	**2.40%**
21-24	5.29%	2.92%	3.85%	8.96%	2.02%	2.88%	4.57%	**5.00%**
25-29	4.28%	3.21%	3.23%	8.17%	1.21%	2.38%	2.44%	**4.41%**
30-39	3.48%	2.34%	5.99%	5.75%	0.87%	1.56%	2.91%	**3.35%**
40-49	3.02%	2.59%	3.11%	5.17%	0.75%	1.56%	3.62%	**2.96%**
50-59	1.84%	2.04%	4.97%	3.46%	1.67%	0.89%	1.14%	**1.93%**
60 and above	0.81%	1.50%	0.35%	2.75%	0.76%	0.00%	1.46%	**0.95%**
Unknown	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
Totals	**2.92%**	**2.32%**	**3.68%**	**6.72%**	**1.13%**	**1.65%**	**2.58%**	**2.99%**

The following table, Table 2.E, illustrates the presence of alcohol in crashes by county. The twelve counties with the highest rate of alcohol involvement in crashes account for only 4.36% of all drinking driver crashes in North Carolina. This is because alcohol-related crashes are much more likely in rural locations and these rural counties have less traffic, hence fewer crashes in general. In contrast, the top 10 counties in number of drinking driver crashes account for close to half (40.64%) of all drinking driver crashes in North Carolina, yet they are among the lowest in alcohol-involved crash rates (representing 6 of the 12 counties with the lowest *rates* of drinking driver crashes.

Table 2.E	Table of County by Driver Alcohol Assessment				
	No Alcohol		Alcohol		
County	Number	Percentage	Number	Percentage	Total
Alamance	3,384	94.84%	184	5.16%	3,568
Alexander	500	92.59%	40	7.41%	540
Alleghany	226	93.78%	15	6.22%	241
Anson	621	94.81%	34	5.19%	655
Ashe	574	94.10%	36	5.90%	610
Avery	319	95.22%	16	4.78%	335
Beaufort	1,082	95.33%	53	4.67%	1,135
Bertie	487	95.12%	25	4.88%	512
Bladen	803	93.59%	55	6.41%	858
Brunswick	2,097	92.95%	159	7.05%	2,256
Buncombe	4,868	93.38%	345	6.62%	5,213

Burke	1,933	94.80%	106	5.20%	2,039
Cabarrus	3,894	95.86%	168	4.14%	4,062
Caldwell	1,512	93.74%	101	6.26%	1,613
Camden	129	95.56%	6	4.44%	135
Carteret	1,243	93.18%	91	6.82%	1,334
Caswell	385	93.45%	27	6.55%	412
Catawba	4,050	94.49%	236	5.51%	4,286
Chatham	1,203	95.25%	60	4.75%	1,263
Cherokee	403	93.07%	30	6.93%	433
Chowan	221	95.26%	11	4.74%	232
Clay	155	94.51%	9	5.49%	164
Cleveland	2,089	93.34%	149	6.66%	2,238
Columbus	1,506	93.95%	97	6.05%	1,603
Craven	1,768	94.39%	105	5.61%	1,873
Cumberland	7,308	94.80%	401	5.20%	7,709
Currituck	333	92.50%	27	7.50%	360
Dare	679	92.26%	57	7.74%	736
Davidson	3,321	94.51%	193	5.49%	3,514
Davie	828	93.77%	55	6.23%	883
Duplin	1,479	95.17%	75	4.83%	1,554
Durham	7,664	96.37%	289	3.63%	7,953
Edgecombe	1,212	94.39%	72	5.61%	1,284
Forsyth	7,765	94.64%	440	5.36%	8,205
Franklin	1,088	93.63%	74	6.37%	1,162
Gaston	4,703	94.67%	265	5.33%	4,968
Gates	249	95.40%	12	4.60%	261
Graham	197	94.71%	11	5.29%	208
Granville	917	95.12%	47	4.88%	964
Greene	456	95.60%	21	4.40%	477
Guilford	10,719	95.23%	537	4.77%	11,256
Halifax	1,147	92.95%	87	7.05%	1,234
Harnett	1,921	94.31%	116	5.69%	2,037
Haywood	1,020	94.01%	65	5.99%	1,085
Henderson	2,321	94.27%	141	5.73%	2,462
Hertford	452	96.17%	18	3.83%	470
Hoke	644	91.09%	63	8.91%	707
Hyde	116	89.92%	13	10.08%	129
Iredell	3,565	94.39%	212	5.61%	3,777
Jackson	839	93.33%	60	6.67%	899
Johnston	3,659	93.99%	234	6.01%	3,893
Jones	305	94.14%	19	5.86%	324
Lee	1,524	94.95%	81	5.05%	1,605
Lenoir	1,344	94.85%	73	5.15%	1,417
Lincoln	1,473	93.58%	101	6.42%	1,574
Macon	562	95.42%	27	4.58%	589
Madison	323	94.44%	19	5.56%	342
Martin	542	93.45%	38	6.55%	580
McDowell	707	92.78%	55	7.22%	762
Mecklenburg	22,985	96.19%	911	3.81%	23,896
Mitchell	290	95.71%	13	4.29%	303
Montgomery	473	96.33%	18	3.67%	491
Moore	1,701	95.72%	76	4.28%	1,777

Nash	2,440	95.20%	123	4.80%	2,563
New Hanover	5,057	94.79%	278	5.21%	5,335
Northampton	404	92.66%	32	7.34%	436
Onslow	3,567	93.35%	254	6.65%	3,821
Orange	2,692	95.70%	121	4.30%	2,813
Pamlico	224	92.18%	19	7.82%	243
Pasquotank	779	94.31%	47	5.69%	826
Pender	1,260	94.59%	72	5.41%	1,332
Perquimans	189	89.15%	23	10.85%	212
Person	785	94.46%	46	5.54%	831
Pitt	4,080	96.36%	154	3.64%	4,234
Polk	311	92.84%	24	7.16%	335
Randolph	3,066	93.96%	197	6.04%	3,263
Richmond	872	93.97%	56	6.03%	928
Robeson	3,332	93.62%	227	6.38%	3,559
Rockingham	1,984	93.85%	130	6.15%	2,114
Rowan	3,031	94.57%	174	5.43%	3,205
Rutherford	1,146	93.70%	77	6.30%	1,223
Sampson	1,437	93.55%	99	6.45%	1,536
Scotland	565	92.62%	45	7.38%	610
Stanly	1,070	95.45%	51	4.55%	1,121
Stokes	829	92.11%	71	7.89%	900
Surry	1,509	93.32%	108	6.68%	1,617
Swain	192	95.05%	10	4.95%	202
Transylvania	476	92.79%	37	7.21%	513
Tyrrell	113	93.39%	8	6.61%	121
Union	3,675	94.86%	199	5.14%	3,874
Vance	1,043	94.73%	58	5.27%	1,101
Wake	21,937	96.09%	892	3.91%	22,829
Warren	302	92.07%	26	7.93%	328
Washington	267	95.70%	12	4.30%	279
Watauga	1,237	94.00%	79	6.00%	1,316
Wayne	2,429	94.73%	135	5.27%	2,564
Wilkes	1,335	93.36%	95	6.64%	1,430
Wilson	2,034	94.43%	120	5.57%	2,154
Yadkin	693	93.90%	45	6.10%	738
Yancey	255	95.15%	13	4.85%	268
STATE TOTAL	**208,900**	**94.85%**	**11,331**	**5.15%**	**220,231**

3. YOUNG DRIVERS

Drivers ages 15 – 20 account for 15.7% of all motor vehicle crashes in North Carolina. Only among the very oldest drivers is it as important to differentiate between single years of age to understand the fundamental issues underlying these crashes. Accordingly analyses presented below show results by single year of age, including 15 year-olds. Although no 15 year-old can legally drive without an adult supervisor in North Carolina some do so, and there are a substantial number who are driving with a supervisor though few of them crash while doing so.

Injury Severity by Year and Driver Age
There was no meaningful change in the severity of young driver injuries from 2001 to 2006. Table 3.A shows, somewhat surprisingly, that injury severity does not differ for young drivers of varying ages.

Table 3.A:	*Number and Percent of Crash-Involved Young Drivers*				
	by Driver Injury Severity and Age				
	(Jan 2006 through Dec 2006)				
		Minor/	Severe/		
Driver Age	PDO	Moderate	Fatal	Unknown	Total
15	80.34%	17.69%	0.52%	1.46%	719
16	76.87%	21.14%	0.98%	1.01%	8,340
17	76.45%	21.58%	0.78%	1.19%	10,818
18	75.23%	22.69%	0.98%	1.09%	13,148
19	75.13%	22.65%	0.91%	1.31%	12,615
20	75.73%	22.09%	0.88%	1.30%	12,284
					57,924

Other Demographic Characteristics of Crash-Involved Young Drivers
As is shown in Table 3.B, among the youngest drivers, males and females are about equally likely to crash. However, among 18 through 20 year-old drivers, females represent only about 43% of crashes. It is not known what accounts for this differential. Research on sex differences in crash rates among the general driving population indicates that much of the difference between the number of males and females in crashes results from the greater amount of driving done by males. That undoubtedly explains some, though perhaps not all, of the sex difference in young driver crashes as well.

Table 3.B	*Table of crashes by age and sex*			
	(Jan 2006 through Dec 2006)			
Driver Age	Male	Female	Unknown	Total
15	607	428	4	1,039
16	4,192	4,070	6	8,268
17	5,732	5,160	8	10,900
18	7,429	5,671	13	13,113
19	7,171	5,354	16	12,541
20	6,734	5,127	15	11,876
Total	**31,865**	**25,810**	**62**	**57,737**

Table 3.C	*Table of Drivers Age by Crashes by Severity*				
	(Jan 2006 through Dec 2006)				
Driver Age	**PDO**	**Fatal**	**Injury**	**Unknown**	**Totals**
15	690	4	333	12	719
16	6,436	16	1,749	67	8,340
17	8,462	12	2,313	113	10,818
18	9,948	27	2,992	146	13,148
19	9,521	23	2,839	158	12,615
20	9,092	32	2,595	157	12,284
Totals	**44,149**	**114**	**12,821**	**653**	**57,924**

Summary Points

- Approximately 75% of young driver crashes involved no injury to the driver.
- Driver injuries were equally (non) severe at each age among young drivers.
- Although the number of young driver crashes increased, this is completely explained by population growth in this age group.
- The number of crashes increases as more young drivers are driving without an adult supervisor in the vehicle.
- Among the youngest drivers females have nearly as many crashes as males
- Among drivers 18 through 20, males account for 56% of crashes.

Time of day, week and year of Young Driver Crashes

Young driver crashes exhibit a distinct pattern throughout the day. This clearly reflects the life conditions that determine the driving patterns of young adults. For 16 and 17 year-old drivers there are sharp peaks during the hours immediately before and after school and lows in the late evening and early morning hours. Nineteen and 20 year-old drivers show a very different pattern, with crashes reaching the highest point during the evening commuting period from 5 to 6 p.m. Eighteen year-old driver crashes represent the fact that this age group is in transition between high school and work worlds, falling between younger and older drivers.

The low percent of 16 & 17 year-old crashes during the day reflect reduced driving during school hours, and this difference would be greater if crashes were looked at only on weekdays during months when school is in session. The lower number of crashes after 9 p.m. clearly reflects the effect of the night driving restriction that applies for 6 months to many 16 and 17 year-old drivers.

Crashes among the youngest drivers (ages 16 & 17) are distributed differently than other driver crashes across months of the year. This is due partly to the effects of the school year, which result in more driving by the youngest drivers. Crashes then decline markedly in June and July, followed by a rise in the fall months.

Despite the influence of school on 16 & 17 year-old driving, the weekday vs. weekend crash distribution for young drivers is essentially the same as for older drivers. Among all drivers 24% of crashes occur on weekends; among 16 & 17 year-olds 23% of crashes occur on weekends and 26% of 18 – 20 year-old driver crashes happen on weekends.

Nature of Driver Errors/Crash Causes Among Young Drivers

Among young driver crashes, the driver did something to contribute to the crash in 68% of all crashes, ranging from 74% for 16 year-olds to 63% for 20 year-old drivers. By comparison, only 48% of drivers ages 25-54 contributed to their crash. A substantial proportion of young driver errors are accounted for by just three actions: Failure to yield, failure to reduce speed appropriately and driving too fast for conditions. With each additional year of age there are fewer cases of each of these driver errors.

Young drivers are much more likely than older drivers to have had a speed-related crash. Whereas 19% of crashes among drivers age 25 - 54 involved speed, 33% of 15 - 20 year-old drivers were involved in a speed-related crash. Speed involvement in crashes decreases with each year of driver age. It is important to note that in most of these cases, exceeding the speed limit was not considered to be the problem. Rather it was a failure to appropriately manage the vehicle's speed that contributed to the crash. In most cases for young drivers, it was the failure to reduce speed as needed that caused the problem, rather than the driver exceeding the posted speed limit. This is an important point because it indicates that speed-related crashes among young drivers are not so much a matter of violating the speed limit as they are a case of the young driver not doing a good enough job assessing the situation and responding appropriately.

Roadway Characteristics and Location

In view of the lack of experience and different driving tendencies of the youngest drivers we might expect that crashes at certain roadway locations or in conjunction with particular roadway characteristics would be different among young drivers. That is in fact the case, although it appears that most of the difference is merely a result of differential exposure. That is, as drivers get older they tend to do more driving in some situations than others. For example, there is a substantial increase in the proportion of crashes that occur on multi-lane roadways. In general, multilane roads are safer than 2-lane roads. Hence the only apparent reason that 'older' young drivers have more crashes on these roads is simply that they do more driving there.

With each additional year of age the proportion of crashes that occur in rural locations decreases. The only explanation we can find for this is that rural roadways are more dangerous and that 16 and 17 year-old drivers are particularly vulnerable to errors in judgments that rural roads require and are lacking in skills necessary to safely maneuver many of these roads.

Between age 16 and 20, the proportion of crashes that occur at an intersection with a traffic light increases from 17% to 22% (a 28% increase). The percent of crashes that occur in this setting continues to climb until age 45 at which point it levels off at 26%. It may be that this reflects an increasing boldness in driving as a result of experience and other changing life conditions that result in a slight increase in risky behaviors at intersections (e.g., running yellow and red lights, right turns on red without stopping, etc.).

Despite the difference in crashes at signalized intersections, there is no overall difference in intersection crashes among younger and older drivers. Among drivers under age 45, about 31% of crashes occur at intersections; young drivers have an essentially identical proportion of crashes at intersections (30%). Moreover there is little variation in the proportion of intersection crashes by age among young drivers, ranging from 32% for 16 year-olds to 30% for 20 year-old drivers.

Alcohol Use by Young Drivers in Crashes

Drinking among young drivers is often misunderstood to be far more common than is actually the case. Among the youngest drivers, alcohol use is quite uncommon, but with each year of age it increases. From this it is clear that drinking among "teen" drivers is not a meaningful notion. The lives of young teens differ dramatically from those of older teens and this is reflected in the dramatically different rates of alcohol-involvement in crashes. Whereas alcohol is very rarely involved in crashes of 16 and 17-year old drivers, involvement by 19 year-old drivers is nearly as common as among drivers ages 30 – 45.

In contrast, alcohol involvement in crashes of 16 & 17 year-olds is lower than for any age group – even those older than 85. Because younger drivers have a higher crash risk at comparable blood alcohol concentration levels, these data suggest that the actual amount of driving after drinking is even lower in comparison to older drivers than the crash data would indicate. This is consistent with national research.

Table 3.D	Alcohol Involvement in Young Driver Crashes by Age				
	(Jan 2006 through Dec 2006)				
	No Alcohol		Alcohol		
Driver Age	Number	Percentage	Number	Percentage	Total
15	553	53.22%	486	46.78%	1,039
16	8,105	98.03%	163	1.97%	8,268
17	10,638	97.60%	262	2.40%	10,900
18	12,605	96.13%	508	3.87%	13,113
19	11,931	95.14%	610	4.86%	12,541
20	11,227	94.54%	649	5.46%	11,876
TOTAL	55,059	95.36%	2,678	4.64%	57,737

Table 3.D shows the average number of yearly crashes by age and the investigating officer's assessment of whether the young driver had been drinking

Summary Points
- Alcohol use by crash-involved young drivers, all of whom are under the legal drinking age, is lower than for all age groups up to age 50.
- Alcohol use among underage persons involved in crashes varies dramatically by driver age. From age 16 thorough 20, alcohol involvement in crashes increases in nearly linear fashion.

Young Driver Crashes by County
Crash rates per capita vary widely across North Carolina counties. It is not known why this is the case, however, there are several partial causes. Since crash rates are based on population rather than licensed drivers, it is likely that those counties where the driver education system is able to move young drivers through at earlier ages will have more young drivers and, as a result more crashes. Conversely, counties where the driver education system is backlogged will delay licensure among the youngest drivers and reduce the number of crashes they experience as a result.

Another factor in young driver crash rates is the road system on which they drive. Those counties with more dangerous roads will experience more crashes overall and this will apply to young drivers as well. It is not clear whether a greater proportion of narrow rural, mountainous roads will produce more young driver crashes or whether a preponderance of heavily congested urban roadways will result in more crashes. Certainly the latter will result in fewer serious crashes because crash speeds will be lower.

Finally, those counties that attract young drivers from other areas, including other states, will exhibit higher crash rates because of more travel within their borders by young drivers. This would be the case in border counties as well as resort communities; it may explain the particularly high crash rates in Dare and New Hanover counties.

Table 3.E provides detailed information about young driver crashes by county as compared to the population of the county for the period from January, 2006 through December, 2006. In addition to showing where crash rates are high this table also indicates where the majority of young driver crashes occur.

Not surprisingly, these are concentrated in counties with larger populations. This is important information for deciding where to concentrate efforts to reduce young driver crashes. Those counties where both the number and rate of young driver crashes is high represent promising targets for community programs.

Percentage per Population		
County	#	% Pop
Watauga	446	1.03%
Pitt	1351	0.92%
New Hanover	1609	0.87%
Catawba	1269	0.84%
Alamance	1147	0.82%
Cabarrus	1242	0.79%
Onslow	1264	0.78%
McDowell	186	0.76%
Mitchell	120	0.76%
Jackson	273	0.75%
Iredell	1091	0.75%
Lee	412	0.75%
Carteret	454	0.71%
Wake	5612	0.71%
Gaston	1375	0.70%
Guilford	3119	0.69%
Ashe	179	0.69%
Johnston	1051	0.69%
Union	1192	0.69%
Duplin	363	0.69%
Cumberland	2106	0.69%
Randolph	944	0.68%
Dare	235	0.68%
Davidson	1043	0.67%
Henderson	669	0.67%
Nash	614	0.67%
Lincoln	473	0.66%
Martin	135	0.66%
Forsyth	2189	0.66%
Rowan	886	0.66%
Pasquotank	262	0.66%
Cleveland	630	0.65%
Wilson	503	0.65%
Buncombe	1437	0.65%
Wayne	746	0.65%
Surry	471	0.65%
Durham	1584	0.64%
Stanly	379	0.64%
Davie	255	0.64%
Robeson	826	0.64%
Alleghany	70	0.64%
Mecklenburg	5211	0.63%
Anson	159	0.63%
Pender	303	0.62%
Sampson	395	0.62%
Columbus	336	0.61%
Pamlico	78	0.60%
Lenoir	341	0.59%
Caldwell	460	0.58%
Moore	473	0.57%
Orange	705	0.57%

County	#	% Pop
Craven	543	0.57%
Stokes	263	0.57%
Wilkes	378	0.56%
Jones	58	0.56%
Richmond	260	0.56%
Beaufort	257	0.55%
Clay	56	0.55%
Haywood	311	0.55%
Rockingham	504	0.55%
Harnett	564	0.54%
Graham	44	0.54%
Rutherford	339	0.54%
Bladen	176	0.54%
Edgecombe	281	0.53%
Brunswick	505	0.53%
Person	198	0.53%
Vance	232	0.53%
Avery	95	0.52%
Yadkin	192	0.51%
Yancey	91	0.50%
Franklin	274	0.50%
Transylvania	149	0.49%
Currituck	114	0.48%
Halifax	263	0.47%
Gates	54	0.47%
Washington	62	0.46%
Bertie	89	0.46%
Greene	95	0.46%
Hyde	25	0.45%
Cherokee	121	0.45%
Tyrrell	19	0.45%
Camden	41	0.44%
Polk	83	0.43%
Chatham	250	0.43%
Alexander	157	0.43%
Hertford	103	0.43%
Montgomery	113	0.41%
Northampton	86	0.40%
Swain	54	0.39%
Perquimans	48	0.39%
Chowan	56	0.38%
Hoke	159	0.38%
Granville	202	0.38%
Scotland	133	0.36%
Macon	154	0.35%
Caswell	80	0.34%
Warren	55	0.28%
Madison	65	0.20%
Burke	8	0.01%
STATE TOTAL	**57132**	

Summary Points

- Three counties (Mecklenburg, Wake, and Guilford) account for 24% of all young driver crashes. Mecklenburg and Wake account for more crashes than the 63 bottom-ranked counties

4. MOTORCYCLE SAFETY
Motorcycle Crashes by Injury Severity Level

North Carolina has over 400,000 licensed/permitted motorcyclists, which is only a small portion of the total licensed driver population and over 180,000 registered motorcycles which is less than 2% of all registered vehicles, however, motorcyclist crashes represent over 10% of our overall crashes statewide and 12.8% of our fatal crashes. When motorcycle drivers are involved in crashes, the outcome is usually more serious in terms of injury and death, as is demonstrated in Table 4.A for Jan 2006 – Dec 2006.

Table 4.A	2006 Motorcycle Crashes vs. All Vehicle Crashes			
(Jan 2006 through Dec 2006)				
Type Cash	Number of Motorcycle Crashes	Percent of Total M/C Crashes	Number All Vehicle Crashes	Percent of Total Vehicle Crashes
PDO	567	15.20%	280,232	76.59%
Type A Injury	405	10.85%	2,487	0.68%
Type B Injury	1,715	45.97%	19,065	5.21%
Type C Injury	886	23.75%	58,752	16.06%
Fatal	130	3.48%	1,013	0.28%
Unknown	28	0.75%	4,330	1.18%
Total	**3,731**	**100.00%**	**365,879**	**100.00%**

Findings

- Approximately 85% of annual motorcyclist crashes involves death or injury for the driver as compared to only 13% for all other vehicles. This is not surprising as motorcycles offer no protection to the rider and the rider is almost always ejected having to rely solely on personal protective gear.
- The number of motorcycle crashes has been increasing for the last five years along with the North Carolina population and number of registered motorcycles, the crash rate for 2006 suggests a continuation of this trend with expectations of it increasing as the number of miles ridden will most likely increase due to the increasing number of riders and rising fuel costs.

Table of fatalities per 10,000 motorcycle registrations

2002	2003	2004	2005	2006
124	108	141	152	155
120,297	132,108	145,468	160,114	166,799
10.31	8.18	9.69	9.49	9.29

Fatal/severe injury crashes were slightly lower during 2006 and as expected are 20% ahead of last years year-to-date numbers most likely due to increased rider population and increased fuel pricing causing a much higher numbers of motorcycle miles driven.

Crash-Involved Motorcycle Driver Demographic Characteristics

The motorcycle crashes over the years were analyzed as a function of a number of demographic variables such as sex, age, and ethnicity of the driver. The age distribution of crash-involved motorcycle drivers over the period Jan 2006 – Dec 2006 is shown in Table 4.B as a function of crash injury severity.

Table 4.B	Motorcycle Drivers by Age and Injury							
	(Jan 2006 through Dec 2006)							
Age	Fatal	A Injury	B Injury	C Injury	No Injury	Unknown	Totals	Percent
15 or Less	0	7	16	5	2	0	30	0.80%
16-17	0	4	19	6	3	1	33	0.88%
18-19	6	17	78	42	20	3	166	4.45%
20-24	21	81	300	150	98	4	654	17.53%
25-29	10	38	197	110	75	2	432	11.58%
30-39	46	85	368	203	107	11	820	21.98%
40-49	25	85	354	198	120	5	787	21.09%
50-59	15	76	287	133	112	2	625	16.75%
60 or Above	7	12	96	39	30	0	184	4.93%
Totals	**130**	**405**	**1715**	**886**	**567**	**28**	**3731**	**100.00%**

Findings

- Motorcycle drivers between the ages of 30 and 49 accounted for 43.1% of all motorcycle crashes and the majority of crashes in each crash severity level.

- There has been a steady shift in the average age of motorcycle drivers, with 40-59 aged motorcyclists becoming an increasingly greater percentage of the riding population.

- Male motorcycle drivers were involved in 94-95% of crashes across the three severity levels. The involvement rates for both sexes remained fairly constant over the 3 years.

Motorcycle Passengers by Crash Injury Severity

Motorcycle drivers are not the only persons at increased risk of injury or death when crashes occur. Passengers on motorcycles are also at higher risk for serious injury

Table 4.C	Motorcycle Operator/Passenger by Injury Type				
(Jan 2006 thru Dec 2006)					
Type Injury	Operator	Percent	Passenger	Percent	Totals
A INJURY	405	10.9%	31	8.8%	436
B INJURY	1715	46.0%	156	44.1%	1871
C INJURY	886	23.7%	88	24.9%	2307
KILLED	130	3.5%	8	2.3%	138
UNKNOWN	28	0.8%	3	0.8%	31
NO INJURY	567	15.2%	68	19.2%	169
TOTAL	3731	100.0%	354	100.0%	4085

Findings
- 354 motorcycle passengers were involved in crashes in 2006, in which 1310.1% received fatal/severe injuries, 69% received moderate/minor injuries, and 19.2% were not injured. These percentages are very similar to those for motorcycle drivers.

- The overwhelming majority of crash-involved passengers (83%) are women, who appear to be somewhat less likely to escape injury in the crash (15%) than are men passengers (23%).

Number of Parties Involved in Motorcycle Crashes

Single-vehicle automobile crashes are often considered to be more strongly related to driver inexperience, immaturity, and risk-taking factors, given that the primary cause of these crashes would seemingly be the drivers themselves, rather than the actions of another party. Although this may also be true for single-vehicle motorcycle crashes, a higher percentage of such crashes for motorcyclists are likely causatively related to weather, environment, and road conditions than is the case for automobile crashes.

Findings
- Single vehicle (motorcyclist only) crashes historically have represented about 50% of all motorcycle crashes each year, and over 50% of all moderate/minor and fatal/severe injury crashes. However, recent trends seem to be changing with only about 37% of 2006 fatal crashes involving another vehicle. Weather, environment, and road conditions, in addition to the usual inexperience, risk-taking, and immaturity factors may influence these high percentages of single-vehicle fatal/injury motorcycle crashes.

- Motorcycle drivers involved in single-vehicle crashes are more likely to have moderate/minor injuries (74%) and less likely to have no injuries (9%) than are motorcycle drivers involved in multiple vehicle crashes (66% and 19%, respectively). Drivers involved in single and multiple vehicle crashes were equally as likely to be fatally or severely injury.

Road Size and Locality of Motorcycle Crashes

Number of roadway lanes, road class (e.g., interstate, U.S. route, local street) and locality (i.e., urban vs. rural) were both associated with crash injury severity level. Table 4.D presents the statistics as a function of the class of road on which the crash occurred.

Table 4.D	Motorcycle Drivers by Road Class and Injury							
(Jan 2006 through Dec 2006)								
Road	Fatal	A Injury	B Injury	C Injury	No Injury	Unknown	Total	Percent
Interstate	5	17	67	32	21	0	142	3.8%
US Route	16	88	288	144	108	5	649	17.4%
NC Route	29	66	297	164	87	6	649	17.4%
State Secondary Rte	44	147	598	254	142	6	1191	31.9%
Local Route	36	88	465	275	190	11	1065	28.5%
Public Vehicle Area	0	4	6	6	3	0	19	0.5%
Other/Unknown	0	5	3	6	2	0	16	0.4%
Total	130	415	1724	881	553	28	3731	100.0%

Findings

- The majority (79%) of all motorcycle crashes, and 77% of all fatal/severe injury crashes, occurs on two-lane roadways.

- Whereas moderate/minor injury crashes were equally likely to occur on roadways with any number of lanes, fatal/severe injury crashes were less likely to occur on 3-lane (10%) and 5-lane (13%) roadways and more likely to occur on those with 2-lanes (18%).

- About 49% of all crashes occur on state secondary roads and on local streets (29%). In addition, 35% of fatal/severe injury crashes and 33% of moderate/minor injury crashes occur on state secondary roads.

Speed Limits and Travel Speed in Motorcycle Crashes

The motorcycle crashes were analyzed as a function of the roadway speed limit where the crash occurred and the estimated travel speed of the motorcycle prior to impact. Table 4.E presents the percentage of crashes combined as a function of crash injury severity and estimated speed of travel.

Table 4.E			Motorcycle Drivers by Road Class and Injury						
			(Jan 2006 through Dec 2006)						
	No Injury		Moderate Minor Injury		Severe / Fatal Injury		Unknown		
Speed	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total
Not Moving	37	6.5%	49	1.9%	4	0.7%	0	0.0%	90
1 to 20	107	18.9%	273	10.5%	23	4.3%	3	10.7%	406
21 to 40	172	30.3%	875	33.6%	125	23.4%	11	39.3%	1183
41 to 60	155	27.3%	1075	41.3%	245	45.8%	9	32.1%	1484
61 to 80	25	4.4%	182	7.0%	92	17.2%	2	7.1%	301
Over 80	5	0.9%	34	1.3%	31	5.8%	0	0.0%	70
Unknown	66	11.6%	113	4.3%	15	2.8%	3	10.7%	197
Totals	**567**	**100.0%**	**2,601**	**100.0%**	**535**	**100.0%**	**28**	**100.0%**	**3,731**

Findings

- Not surprisingly, the risk of fatal/severe injury increases linearly as a function of increasing speed limit. In fact, more than 72% of fatal/injury crashes occurred at speeds of 40 MPH or higher.

- Moderate/minor injury crashes were the less likely to occur on roadways with 60-65 MPH and 70 MPH roadways, because even more severe injury was likely on these roads.

- Estimated speed of travel was strongly associated with crash injury severity level with higher speeds almost uniformly associated with greater risk of injury.

- Whereas 15% of all motorcyclist crashes occurred at speeds above 60 MPH, 26% of the fatal/severe injury crashes were associated with such speeds.

Roadway Characteristics, Composition, and Condition in Motorcycle Crashes
To determine the effect of road-related factors, motorcycle crashes were analyzed as a function of the type of road surface (i.e., smooth concrete/asphalt vs. more adverse road surface), condition of road surface (i.e., dry road vs. wet, sandy, icy, etc.), road characteristics (i.e., straight vs. curve or other), and special road features (in particular, work zones, bridges, and railroad crossings).

Findings

- The type of road surface (i.e., smooth concrete/asphalt vs. grooved pavement or other more adverse road surface) was not found to be related to crash severity.

- Adverse roadway surface conditions (e.g., water, gravel, or ice) were found to be associated with higher risk for non-injury crashes (20%) and lower risk for fatal/severe injury crashes (11%) than would be expected if roadway surface condition and crash severity were unrelated. This could be associated with lower travel speeds under these conditions. Risk for other injury was the same as for dry/clean roads (69%).

- About 34% of all motorcycle crashes occur on curved roadway segments, though 46% of fatal/severe injury crashes occur on curved segments. Curved segment crashes are more likely to result in fatal/severe injury (23%) than are crashes on straight segments (14%).

- Intersection was the special roadway feature most often associated with motorcycle crashes of all types (24%), but was not related to crash severity. Although crashes at driveway intersections represented only a small percentage of motorcycle crashes (8%), they were somewhat overrepresented in fatal/severe injury crashes (10%).

- Although railroad crossings and bridges are considered to be more treacherous for motorcycles than for automobiles, only small percentages of crashes (0-1%) were found to coincide with these special road features, and neither was related to crash severity.

- Similarly, road work zones are considered to be more dangerous for motorcyclists because of road debris and changes in the road grade associated with such areas, but only very small percentages of motorcyclist crashes were found to occur in work zones across the 3 years (1-2%), and crashes in work zones were not associated with any higher severity level for the motorcyclist.

Precipitating Events and Driver Actions in Motorcycle Crashes
Among other things, law enforcement officers are asked to code the first harmful precipitating event that lead to the crash on the report form as well as the vehicle maneuvers just before the crash occurred. Table 4.F shows the percentage of crashes of each severity level combined across all 3 years as a function of the first harmful precipitating event that lead to the crash.

Note. First harmful event or crash injury severity level was missing for 47 (0.6%) of the cases.

Findings
- For the majority (80%) of crashes across severity levels and years, the motorcyclist was simply driving straight on a roadway. This was particularly the case for severe/fatal (88%) and moderate/minor injury (81%) crashes than for no injury crashes (64%).

- The most common harmful precipitating events combined across all crashes were rollovers (19%), followed by hitting a fixed object (13%), rear-ending another vehicle (13%), the motorcyclist or another vehicle making a left/right turn (13%), and running off the roadway (12%).

- Fatal/severe injury to the motorcyclist was strongly associated with head-on crashes (40%), hitting a fixed object (25%), left/right turns (21%), and running off roadways (18%).

Alcohol and Drug Use in Motorcycle Crashes

The motorcycle crashes were analyzed as a function of whether alcohol, illegal drugs, or medications were considered to be a factor in the crash by law enforcement. Table 4.F presents the percentage of crash-involved motorcycle drivers as a function of alcohol/drug use.

Table 4.F	Motorcycle Drivers by Age/Injury by DRINTOX									
	(Jan 2006 – Dec 2006)									
							Alcohol Involved		No Alcohol Involved	
Age	Fatal	A Injury	B Injury	C Injury	No Injury	Unknown	Totals	Percent	Totals	Percent
>=15	0	1	0	0	0	0	1	0.4%	30	0.8%
16-17	0	0	0	0	0	0	0	0.0%	33	0.9%
18-19	0	0	2	1	0	0	3	1.2%	166	4.4%
20-24	5	10	12	9	1	1	28	15.3%	654	17.5%
25-29	3	6	11	9	1	0	30	12.1%	432	11.6%
30-39	7	17	23	11	6	1	65	26.2%	820	22.0%
40-49	5	13	30	13	2	0	63	25.4%	787	21.1%
50-59	4	7	20	10	2	0	43	17.3%	625	16.8%
<=60	0	1	4	0	0	0	5	2.0%	184	4.9%
Totals	**24**	**55**	**102**	**53**	**12**	**2**	**248**	**100.0%**	**3,731**	**100.0%**

Findings

- Alcohol use was reportedly involved in 7% of all motorcycle crashes, but 15% of fatal/severe injury crashes.

- Whereas only 8% of crashes not reporting alcohol or illegal drug involvement resulted in fatal/severe injury, 32% of crashes reporting alcohol use resulted in fatal/severe injury.

Safety Equipment Use and Vehicle Defects in Motorcycle Crashes

The motorcycle crashes were analyzed as a function of helmet usage and vehicle defects identified by law enforcement during the crash investigation

Findings

- The percentages of crash-involved motorcyclists wearing helmets was uniformly high (91%) across all years and levels of crash injury severity. However, it is not known to what extent novelty (i.e., non-FMVSS 218 compliant) motorcycle helmets are being worn, or how these are identified and coded by law enforcement officers. It is also not known whether improperly worn helmets (e.g., strap unbuckled) are coded as helmeted or no helmet.

- Probably due to the high helmet usage rate, there was little evidence of a relationship between helmet usage and crash injury severity.

- The most common motorcycle defect associated with the crashes coded by law enforcement officers were tire defects, which were noted for about 2% of the crashes and were somewhat overrepresented (3.5%) in fatal/severe injury crashes.

Table 4.G   Motorcycle Crashes by County Ranked by Frequency
(Jan 2006 Thru Dec 2006)

County	Number	Percent Per 100 Population	County	Number	Percent Per 100 Population
WAKE	250	3.16%	HALIFAX	23	4.14%
MECKLENBURG	210	2.54%	BEAUFORT	22	4.75%
CUMBERLAND	194	6.33%	RICHMOND	22	4.71%
ONSLOW	136	8.44%	LENOIR	20	3.44%
GUILFORD	135	3.01%	WILSON	20	2.58%
FORSYTH	105	3.16%	CHEROKEE	19	7.11%
GASTON	103	5.22%	MADISON	19	5.74%
BUNCOMBE	102	4.61%	EDGECOMBE	19	3.61%
GRAHAM	86	106.09%	DUPLIN	19	3.60%
NEW HANOVER	86	4.67%	COLUMBUS	19	3.48%
CABARRUS	84	5.34%	FRANKLIN	19	3.43%
IREDELL	82	5.65%	JACKSON	18	4.96%
CATAWBA	81	5.36%	DAVIE	18	4.52%
DAVIDSON	78	5.02%	CHATHAM	18	3.12%
DURHAM	73	2.96%	SAMPSON	17	2.65%
RANDOLPH	65	4.69%	ALLEGHANY	16	14.55%
BURKE	61	6.88%	YADKIN	15	3.97%
ALAMANCE	61	4.36%	GRANVILLE	15	2.79%
ROWAN	60	4.46%	DARE	14	4.03%
JOHNSTON	60	3.96%	ALEXANDER	13	3.58%
UNION	60	3.49%	BLADEN	12	3.65%
PITT	53	3.62%	CURRITUCK	10	4.24%
NASH	52	5.64%	ANSON	10	3.94%
HENDERSON	50	4.99%	MONTGOMERY	10	3.64%
WAYNE	48	4.18%	AVERY	9	4.95%
ROBESON	48	3.72%	POLK	9	4.72%
BRUNSWICK	44	4.63%	SCOTLAND	9	2.43%
HARNETT	44	4.24%	CAMDEN	8	8.60%
CRAVEN	42	4.39%	MARTIN	8	3.91%
CLEVELAND	39	4.03%	ASHE	8	3.10%
CALDWELL	35	4.41%	PERSON	8	2.14%
SWAIN	34	24.39%	PASQUOTANK	8	2.00%
WATAUGA	34	7.83%	JONES	7	6.78%
HAYWOOD	34	6.00%	YANCEY	7	3.81%
WILKES	34	5.08%	GREENE	7	3.36%
ORANGE	34	2.75%	CASWELL	7	2.97%
RUTHERFORD	33	5.22%	CHOWAN	6	4.09%
MACON	32	7.33%	WASHINGTON	5	3.74%
SURRY	32	4.38%	BERTIE	5	2.58%
CARTERET	31	4.88%	NORTHAMPTON	5	2.32%
LINCOLN	31	4.35%	HERTFORD	5	2.09%
ROCKINGHAM	29	3.16%	VANCE	5	1.14%
MOORE	28	3.40%	PERQUIMANS	3	2.41%
TRANSYLVANIA	27	8.90%	MITCHELL	3	1.89%
STANLY	27	4.57%	WARREN	3	1.50%
HOKE	24	5.69%	CLAY	2	1.98%
PENDER	24	4.93%	GATES	2	1.73%
MCDOWELL	23	9.43%	HYDE	1	1.81%
STOKES	23	4.96%	PAMLICO	0	0.00%
LEE	23	4.16%	TYRRELL	0	0.00%
			Total	**3731**	**4.21%**

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Table 4.H   Motorcycle Crashes by County Ranked by Percentage
             (Jan 2006 Thru Dec 2006)

County	Number	Population Percent Per 100		County	Number	Percent Per 100 Population
GRAHAM	86	106.09%		CHOWAN	6	4.09%
SWAIN	34	24.39%		CLEVELAND	39	4.03%
ALLEGHANY	16	14.55%		DARE	14	4.03%
MCDOWELL	23	9.43%		YADKIN	15	3.97%
TRANSYLVANIA	27	8.90%		JOHNSTON	60	3.96%
CAMDEN	8	8.60%		ANSON	10	3.94%
ONSLOW	136	8.44%		MARTIN	8	3.91%
WATAUGA	34	7.83%		YANCEY	7	3.81%
MACON	32	7.33%		WASHINGTON	5	3.74%
CHEROKEE	19	7.11%		ROBESON	48	3.72%
BURKE	61	6.88%		BLADEN	12	3.65%
JONES	7	6.78%		MONTGOMERY	10	3.64%
CUMBERLAND	194	6.33%		PITT	53	3.62%
HAYWOOD	34	6.00%		EDGECOMBE	19	3.61%
MADISON	19	5.74%		DUPLIN	19	3.60%
HOKE	24	5.69%		ALEXANDER	13	3.58%
IREDELL	82	5.65%		UNION	60	3.49%
NASH	52	5.64%		COLUMBUS	19	3.48%
CATAWBA	81	5.36%		LENOIR	20	3.44%
CABARRUS	84	5.34%		FRANKLIN	19	3.43%
RUTHERFORD	33	5.22%		MOORE	28	3.40%
GASTON	103	5.22%		GREENE	7	3.36%
WILKES	34	5.08%		WAKE	250	3.16%
DAVIDSON	78	5.02%		FORSYTH	105	3.16%
HENDERSON	50	4.99%		ROCKINGHAM	29	3.16%
STOKES	23	4.96%		CHATHAM	18	3.12%
JACKSON	18	4.96%		ASHE	8	3.10%
AVERY	9	4.95%		GUILFORD	135	3.01%
PENDER	24	4.93%		CASWELL	7	2.97%
CARTERET	31	4.88%		DURHAM	73	2.96%
BEAUFORT	22	4.75%		GRANVILLE	15	2.79%
POLK	9	4.72%		ORANGE	34	2.75%
RICHMOND	22	4.71%		SAMPSON	17	2.65%
RANDOLPH	65	4.69%		BERTIE	5	2.58%
NEW HANOVER	86	4.67%		WILSON	20	2.58%
BRUNSWICK	44	4.63%		MECKLENBURG	210	2.54%
BUNCOMBE	102	4.61%		SCOTLAND	9	2.43%
STANLY	27	4.57%		PERQUIMANS	3	2.41%
DAVIE	18	4.52%		NORTHAMPTON	5	2.32%
ROWAN	60	4.46%		PERSON	8	2.14%
CALDWELL	35	4.41%		HERTFORD	5	2.09%
CRAVEN	42	4.39%		PASQUOTANK	8	2.00%
SURRY	32	4.38%		CLAY	2	1.98%
ALAMANCE	61	4.36%		MITCHELL	3	1.89%
LINCOLN	31	4.35%		HYDE	1	1.81%
HARNETT	44	4.24%		GATES	2	1.73%
CURRITUCK	10	4.24%		WARREN	3	1.50%
WAYNE	48	4.18%		VANCE	5	1.14%
LEE	23	4.16%		PAMLICO	0	0.00%
HALIFAX	23	4.14%		TYRRELL	0	0.00%
				Total	**3731**	**4.21%**

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Findings

- Although counties Graham, Swain and Allegany represent lower counts of crashes, they are the three highest ranked by far as compared to the population of each county. Each of these counties is in the mountains with tight, twisty roads popular with many motorcyclists. Graham County contains Highway 129, commonly known as "The Dragon" because of its 318 turns in an eleven mile stretch. Riders as well as sports car enthusiasts ride/drive this road at excessive speeds for the roads, frequently causing crashes due to over riding the curves. Even with increased law enforcement from North Carolina and Tennessee which shares a section of this road, there are still excessive crashes in this area.

Summary of Motorcycle Crash Findings

- The overwhelming majority of motorcycle crashes involve death or injury for the driver. Most crash-involved motorcycle drivers are men between the ages of 20 and 54.

- The typical motorcycle crash occurs between April and October on a Friday, Saturday, or Sunday between 12:00 noon and 7:00 p.m. during clear weather on a rural two-lane state secondary road with a 55 MPH speed limit.

- Single vehicle (motorcyclist only) crashes represent about half of all motorcycle crashes, and over half of all moderate/minor and fatal/severe injury crashes.

- Both higher speed limits and higher speeds of travel were associated with greater risk of injury in the crash to the driver.

- Curved roadway crashes are overrepresented in motorcycle crashes and are associated with greater risk for fatal/severe injury than straight roadways.

- Although railroad crossings, bridges, and highway work zones are considered to be more treacherous for motorcycles than for automobiles, only small percentages of crashes (0-2%) were found to coincide with these special road features, and none were related to severity.

- Rollovers, hitting a fixed object, rear-ending another vehicle, the motorcyclist or another vehicle making a left/right turn, and running off the roadway are the most harmful precipitating events of motorcycle crashes.

- Fatal/severe injury to the motorcyclist was strongly associated with head-on crashes, hitting a fixed object, left/right turns, and leaving roadways.

- The percentages of crash-involved motorcyclists wearing helmets were uniformly high across all levels of crash injury severity. This does not identify if helmets worn wore of the type that met DOT standards or were the novelty type.

- Over 300 motorcycle passengers are involved in crashes in 2006, many of which are women who are injured or killed as a result.

- The following 20 counties had both an overrepresentation of crashes and severe injury / fatalities: Buncombe, Burke, Catawba, Cumberland, Durham, Forsyth, Graham, Guilford, Hanover, Iredell, Mecklenburg, Onslow, Pitt, Randolph, Wake, Cabarrus, Davidson, Gaston, Johnston, Robeson, and Union. These counties are in the greatest need of motorcycle crash interventions.

5. PEDESTRIAN SAFETY

In 2006 there were 1,700 pedestrian-motor vehicle crashes that were reported to the NC Division of Motor Vehicles.

Although crashes involving pedestrians represent less than 1% of the total reported motor vehicle crashes in North Carolina, pedestrians are highly over-represented in fatal and serious injury crashes. Approximately 17% of the fatal crashes in North Carolina involved pedestrians. On average, 170 (10% of those struck) pedestrians were killed and an additional 354 were seriously injured each year from 2000 to 2002.

Although the number of pedestrian crashes decreased in 2006, an apparent declining trend in the proportion of disabling (A-type) injuries reported has continued. These changes, which began with the year 2000, and echo those for all crashes, may result at least in part from new reporting practices (perhaps more stringent definition of A-type injuries) instituted with the new crash report form and instruction manual in use beginning with the year 2000. The proportion of reported A-type injuries has dropped from 15% in 2000 to 10% in 2002. The proportions of B type, C type, and no injury crashes have increased proportionally.

Pedestrians should be expected to walk anywhere they are not strictly prohibited and reasonable accommodation for their safety and access should be provided on all roadways. Even on interstates, motorists may have to walk from disabled vehicles, or pedestrians may try to cross busy interstates that pass through urban areas. The tables, figures, and text that follow are intended to illuminate the characteristics of pedestrian crashes and highlight some of the pedestrian safety issues across North Carolina. Some discussion of potential countermeasures is included. Nevertheless, more in depth analyses of particular locations and conditions are required in most cases, before definite countermeasures can be implemented.

Temporal factors

There are slight year to year fluctuations, but pedestrian crashes in North Carolina are fairly evenly distributed throughout the year each year. The highest proportions occurred during the months of October) followed by September and May for the years 2000 – 2005. The lowest total occurred in February, followed by July for the six years. Other months account for about 8 to 9%.

Pedestrian crashes peak on Friday (17.9%) and Saturday (16.5%), with the lowest proportion occurring on Sunday (10.1%) for the three-year. Thursday also accounts for a slightly higher proportion than other weekdays at 14.7%.

Pedestrian crashes are most likely to occur in the afternoon and early evening between the hours of 2 pm to 6 pm and 6 pm to 10 p.m., with over half of pedestrian crashes occurring during these eight hours. The mid-day period of 10 am to 2 pm accounts for the third highest proportion of crashes. There is no significant year to year variability in these trends.

> Temporal factors are doubtlessly related to exposure. For greatest effect, enforcement or other safety measures would be targeted toward afternoon to evening hours, with an emphasis on Fridays and Saturdays (evenings), and, with particular emphasis during the months of September – October, and May. The fall peaks in pedestrian crashes are likely related to back-to-school periods, so special emphasis on enforcement around schools during these time periods could pay off.

Environmental factors

About 40% of pedestrian crashes over the last three years have occurred during non-daylight conditions, including dusk and dawn. Most non-daylight crashes occurred under conditions of darkness. Over half of night-time crashes occurred on lighted roadway segments, although almost as many occurred in unlighted areas. The remaining 58% of pedestrian crashes occurred during daylight hours. Trends are fairly consistent across years, but there are slight year-to-year fluctuations.

> The vast majority (above 93%) of pedestrian crashes occur under clear or cloudy weather conditions on average no doubt reflecting exposure (fig. 5.D. Year to year variation in the number of crashes occurring under rainy, or other conditions (frozen precipitation, or foggy/smoky, etc.) conditions, is also likely a reflection of exposure to these conditions (e.g., more pedestrian crashes under snowy conditions in years when the state received more snowfall).

While most crashes (55%) occurred during clear or cloudy weather *and* under daylight conditions, 18% occurred during night-time on lighted roadways (clear or cloudy) and another 15% occurred during night-time on unlighted roadways (clear or cloudy conditions). Countermeasures include adding lights to non-lighted areas where pedestrians may be expected, as well as education about pedestrian conspicuity: wear bright clothing, carry lights at night, walk facing traffic.

Pedestrian characteristics

It is difficult to draw any conclusions about the year-to-year fluctuations in crash proportions by age group. The 51 to 60 year group has, however, shown numerical and proportional increases each of the three years while the 26 to 30 year group has shown a decline. These changes may reflect increases in the proportion of the population in this age group, as well as possible changes in exposure (more walking) and/or simply random variation. On average, older teens (16 to 20) and young adults (21 to 25), accounted, however, for greater numbers and proportions of pedestrian crashes than other groups, probably reflecting greater pedestrian mobility among these ages. Beginning with the 41 to 50 year group, the proportion of crash involvement starts declining as age increases.

The proportions of those killed and seriously injured (disabling type injuries) is, however, higher than the overall crash involvement for age groups beginning with the 31 to 40 age group and above. These results probably ensue for the most part, from differences in crash location and types of crashes that different age groups tend to be involved in, and thus discussion of countermeasures will be included in the section on crash type involvement. The results of increasing crash seriousness with increasing age also likely reflect to some extent increasing vulnerability, particularly of the oldest age group.

Males consistently accounted for nearly 2/3 (63%) of the pedestrians reported involved in crashes in each of the 3 years while females were involved in a little over 1/3 or 37% of pedestrian crashes.

Although pedestrian crashes in North Carolina are most likely to involve pedestrians of White racial background (approximately 49%), Blacks are almost as likely to be victims (approximately 41% - Table 5.A). Considering they comprise about 22% of persons living in the State (2000 census data), Blacks are clearly over-represented in pedestrian crashes, and Whites are under-represented based on the population (about 72%). There appears, however, to be a decreasing trend in the proportion of crashes involving black pedestrians, from around 45% in 1998 to about 41% in 2006, while involvement by other groups has increased slightly. Whether these trends reflect changes in exposure (the amount or conditions of walking) or other factors is unknown. Asians and Native Americans each account for less than 1% of the total pedestrian crashes. Since the year 2000, when the state began identifying Hispanics and persons of Asian descent on crash report forms, Hispanics have accounted for about 5 – 7% of the pedestrian crashes each year, and a comparable proportion of the population, 4.7% in 2000.

Table 5.A   **Table of Pedestrian Age by Race**
(Jan 2006 through Dec 2006)

Age	White	Black	Hispanic	Native American	Asian	Other	Unknown	Total
15 and Under	116	140	22	4	1	3	3	289
16 to 20	109	98	6	4	2	0	2	221
21 to 29	145	98	23	4	4	0	4	278
30 to 39	114	104	21	7	1	0	4	251
40 to 49	162	128	9	7	0	4	3	313
50 to 59	97	82	5	0	3	1	2	190
Over 60	86	46	7	7	3	2	7	158
Total	**829**	**696**	**93**	**33**	**14**	**10**	**25**	**1700**

The investigating officer indicated alcohol use by about 14% of the pedestrians struck by motor vehicles over this period with the proportion apparently declining from around 13% in 2000 to 7% in 2005 but rising to 14% again in 2006. (Table 5.B). Indicated use does not necessarily imply that the pedestrian was intoxicated at the time of the crash, only that alcohol use was detected.

Table 5.B   **Pedestrian by Age by DRINTOX**
(Jan 2006 through Dec 2006)

	Alcohol Involved		No Alcohol		
Age	Number	Percent	Number	Percent	Total
15 and under	0	0.00%	289	100.00%	289
16 to 20	11	4.98%	210	95.02%	221
21 to 29	57	20.50%	221	79.50%	278
30 to 39	51	20.32%	200	79.68%	251
40 to 49	74	23.64%	239	76.36%	313
50 to 59	27	14.21%	163	85.79%	190
60 and above	16	10.19%	141	89.81%	157
Total	**236**	**13.89%**	**1463**	**86.11%**	**1,699**

Driver use of alcohol was detected in an average of 4% of the drivers involved in collisions with pedestrians over the period. This rate is slightly lower than alcohol detection reported for crashes overall over the same period (5.7%).

Roadway and location characteristics of pedestrian crashes
Although rural crashes accounted for about 47% of crashes in 2006 (and 47% of all injuries), they tend to be more serious, comprising 44% of the A type (disabling) injuries and 72% of those killed in pedestrian crashes.

Crash severity also tends to vary by roadway classification, as might be expected (Table 5.C).

Table 5.C   Pedestrian Injury by Road class
                                              (Jan 2006 through Dec 2006)

Road class	Fatal	Injury	PDO	Unknown	Total
Interstate	11	37	2	2	52
US	38	147	8	2	195
NC	31	167	8	2	208
SSR	43	286	4	3	336
Local Street	46	748	15	12	821
Private road/drive	2	10	2	0	14
PVA	0	52	4	0	56
Unknown	0	2	0	0	2
Total	**171**	**1449**	**43**	**21**	**1,684**

The majority of reported pedestrian roadway crashes occurred on two-lane roads, while approximately 28% occurred on roadways with four or more through travel lanes. There are year-to-year fluctuations in most categories, but an apparent increasing trend in the number of pedestrian crashes on single-lane roads (avg. of 5%), and a slight downward trend in the proportion occurring on three-lane roadways (data not shown). These changes may reflect changes in the extent of roadways in operation with these numbers of lanes, extent of walking on such roadways, or other factors.

When typing crashes, reviewers coded on average, approximately one-fourth of pedestrian crashes for the three years as having occurred at intersections, slightly less than ½ occurred at non-intersection roadway locations, with the remainder (29%) occurring at non-roadway locations. These proportions vary considerably by rural and urban location, with 64% of rural crashes occurring at non-intersection locations compared to 38% of urban crashes. Only 11% of rural crashes occurred at intersections, while 31% of urban crashes took place at intersections.

Understanding the location characteristics of crashes (both numbers and severity) can help in determining where to direct resources and countermeasures. Additional information by county will also be provided below. The types of countermeasures that may be implemented depend, however, on the types of crashes occurring at urban / rural locations, by roadway type, intersection versus non-intersection, as well as other location variables. These characteristics are discussed below.

Counties

Obviously, the more urbanized areas tend to account for the highest numbers and percentages of crashes in the state. The ten counties that account for the highest percentages of pedestrian-motor vehicle crashes for the year 2006 were:

County	Number	Percent
MECKLENBURG	254	14.95%
WAKE	183	10.77%
CUMBERLAND	89	5.24%
DURHAM	86	5.06%
GUILFORD	60	3.53%
GASTON	49	2.88%
NEW HANOVER	44	2.59%
ROBESON	43	2.53%
ORANGE	37	2.18%
BUNCOMBE	36	2.12%
		51.85%

The ten highest crash counties accounted for 51.85% of NC's reported pedestrian / motor-vehicle crashes.

Summary of findings

While pedestrian crash rates may seem low compared with overall crash rates, the high proportions of fatalities and serious injuries and the need to provide a safe and encouraging environment for pedestrians on the roadways warrants a serious effort to address pedestrian safety on the state's roadways. While more crashes occurred in urbanized areas, rural crashes tend to be particularly serious, with nearly 28% of those hit in rural areas killed or seriously injured.

Crashes typically occur during daylight hours (58%) but nighttime crashes are probably over-represented. We have, however, no exposure data to test this hypothesis. Crashes also occurred the majority of the time during clear or cloudy weather, also no doubt reflecting the greater amounts of walking / exposure that occur under these conditions.

The most frequent crash type involves Pedestrian failure to yield. It should be pointed out, however, that this crash type does not necessarily imply fault. For example, a pedestrian may detect a gap at a mid-block area and begin crossing, but a speeding motorist closes the gap sooner than expected and strikes the pedestrian. While the pedestrian may not have been visible, and strictly speaking, may not have had the right-of-way, the motorist was clearly at fault under these circumstances by speeding, and failing to slow and avoid the crash.

Actual speed has not been directly addressed to this point, due to the difficulty in obtaining meaningful speed data from the limited number of pedestrian crash reports. The evidence, based on national data suggests that speeding is a contributing factor in 31% of crashes of all types, nationally, and in 38% in NC. Lowering travel speeds may therefore help prevent crashes and reduce the occurrence of pedestrians being struck. Additionally, a widely cited study found that when a crash does occur, the chance of death increases dramatically as speed of the vehicle involved increases. The chance of death is 5% at 20 mph, increasing to a 45% chance at 30 mph, and an 85% chance of death, if the vehicle is traveling at 40 mph.

The NC data included in this report, including the greater seriousness of crashes in rural areas, the higher proportions killed and seriously injured on 50 mph and above roadways, and on interstate, NC, and US highways, where speeds are significantly higher than in urban areas and on local streets, also suggest that speed has a serious effect on pedestrian crash outcomes, given that a crash occurs. Thus, addressing the problem of speeding statewide is a key to improving pedestrian safety as well as the safety of all road users.

Pedestrian Dart / dash crashes which typically (but not always) involve children, and occur mid-block on local streets is another crash type that warrants attention through calming these streets. Walking along roadway crashes occur most often at night on unlit roadways where sidewalks are lacking and occur in greater proportion and number in rural areas than urban. Other high frequency crash types include unusual circumstance, unusual pedestrian, and unusual vehicle type crashes. While these may not seem to lend themselves to intervention, they illustrate that pedestrians are likely to be found in a variety of places and circumstances doing a variety of things. Virtually everyone becomes a pedestrian at some time and under some circumstances. Therefore, pedestrian safety improvements to the states roadways are warranted to protect all users, many of whom may not be readily apparent as pedestrians.

Providing space for pedestrians, facilities to assist safe crossing of busy roadways, calming neighborhood streets, and instituting appropriate speed limits and ensuring that motorists comply with them either through enforcement or engineering countermeasures, will help provide protection for pedestrians and enhance the quality of life throughout the state. Pedestrians should not feel unable to move about due to barriers of high-speed, and increasingly high-volume roadways with no place to safely walk.

6. BICYCLIST SAFETY
More than 700 bicyclist-motor vehicle crashes have been reported to the NC Division of Motor Vehicles during each of the years 2003 and 2004 (776 and 818 crashes, respectively). This number jumped to 1174 in 2005 and declined dramatically to 667 in 2006.

Although crashes involving bicyclists represent less than ½% of the total reported motor vehicle crashes in North Carolina, bicyclists are over-represented in fatal and serious injury crashes. Approximately 1% of the fatal crashes in North Carolina involved bicyclists.

On average, 33 bicyclists were killed and an additional 67 were seriously injured each year between 2003 and 2005. Fortunately most bicyclist crashes do not result in serious or fatal injuries, with about 97% in 2006 resulting in injuries and about 2% resulting in a fatality.

The number of bicyclist crashes has fluctuated over the past three years, but no obvious trend is apparent over this time period. Over a longer period, crashes appeared to be declining in North Carolina until 2005 with the downward trend continuing in 2006 it would appear that the increase in 2005 was an anomaly. This trend may be a result of decreasing exposure, particularly among children. The proportion of disabling (A-type) injuries has not declined as consistently as A-type injuries in other categories. This general downward trend in A-type injuries, which began with a significant decrease from 1999 to 2000, and echo those for all crashes, may result at least in part from new reporting practices (perhaps more stringent definition of A-type injuries) instituted with the new crash report form and instruction manual in use beginning with the year 2000. The proportions of B type (evident) and C type (possible) injuries have remained relatively constant. The proportion of no injury crashes have increased from 5.3 to 11.3% over this time period.

Bicyclists should be expected to ride anywhere they are not strictly prohibited and reasonable accommodation for their safety and access should be provided on all roadways. An increasing emphasis on health and physical activity and improving multi-modal access to roadways warrants consideration of bicyclists whenever new roadways are developed or old ones improved. The tables, figures, and text that follow are intended to illuminate the characteristics of bicyclist crashes and highlight some of the bicycle safety issues across North Carolina.

Temporal factors
Crashes involving bicyclists vary seasonally with the highest levels during the spring and summer months, and the lowest percentages during late fall and winter months .These trends no doubt reflect seasonal riding trends. The peak months are July and August at approximately 12%, followed closely by May, June and September. December and January are the lowest crash months.

Bicyclist crashes peak on Friday (16.3%) and Saturday (15.2%), with the lowest proportion occurring on Sunday (11.3%). Other weekdays account for about 14 to 15% of crashes, with Monday being slightly lower (13.9%).

Forty percent of bicycle – motor vehicle crashes occurred in the afternoon hours of 2 pm to 6 pm over this two year period. Twenty-six percent of crashes occurred during early evening between 6 pm to 10 pm, followed by 20% around midday. Slight year to year fluctuations in these proportions may reflect differences in exposure due to weather and other factors.

Temporal factors are doubtlessly related to exposure or when bicyclists ride most.

Environmental factors
The vast majority of crashes occur under daylight conditions. Three-fourths of bicycle crashes with motor vehicles occurred under daylight conditions. Eighteen percent occurred at night, with10% on lighted roadway segments and 8% on unlighted. There was a drop from 15 crashes (about 2%) to 2 crashes (0.2%) that occurred during early morning (dawn) hours from 2000 to 2002 and slight year-to-year increases in crashes at nighttime (on both lighted and unlighted roadways). These results may be due to random variation or may reflect exposure differences – more or less riding under those conditions.

> The vast majority of bicyclist crashes occurred under dry weather conditions (clear or cloudy) on average no doubt reflecting exposure. Only 3% occurred during rain and less than 1% occurred under all other conditions (freezing precipitation, fog/smog/smoke, and other). Slight year to year fluctuations in the number of crashes occurring under rainy and other conditions, is also likely a reflection of exposure to these conditions (e.g., more bicyclist crashes under rainy conditions in years when the state received more rainfall).

While most crashes occurred during clear or cloudy weather and under daylight conditions, 17% occurred during nighttime on lighted or unlighted roadways (clear or cloudy conditions). Most bicyclists apparently try to avoid riding during rain or other precipitation with only about 1 ½ % of crashes occurring during rain in daylight hours and slight more than 1% occurring during rain at night, dusk or dawn. The highest proportions of nighttime crashes occur during the fall months of September to November, with the lowest proportion occurring during winter months. Countermeasures for night-time crashes include adding lights to non-lighted areas where bicyclists may be expected, as well as education about bicyclist conspicuity: wear bright clothing, and use lights at night, and perhaps including reminders of decreasing day length as fall approaches in safety publications.

Bicyclist characteristics

It is difficult to draw firm conclusions about the year-to-year fluctuations in crash proportions by age group (Table 6.B). There seems, however, to be an increasing trend across the board within all age groups. Whether these trends will be sustained or are due to more than random variation is unknown; we do not have information about the amount of riding or exposure that goes on in the state or among different age groups. There are, however, some suggestions that child bicycling may be decreasing while that among adults may be increasing.

Table 6.B   Bicyclist Age by Crash Year

Age Group	2003	2004	2005	2006	Total
15 and under	250	267	220	174	911
Age 16-20	105	102	66	89	273
Age 21-29	111	111	71	51	293
Age 30-39	109	116	192	93	604
Age 40-49	119	130	72	106	417
Age 50-59	44	50	30	63	124
60+ or unknown	35	42	25	37	102
Total	**773**	**818**	**675**	**613**	**2,723**

It is also difficult to draw firm conclusions about relationship of seriousness of bicyclist injuries to age. There is, however, apparently over-involvement of children 6 to 10 and young teens 11 to 15 in serious (type A) injury crashes, although not in fatal crashes. Adults twenty-five and up seem, however to be over-involved in crashes resulting in fatal injuries, particularly the 50 to 59 year group. These results may result primarily from differences in crash location and types of crashes that different age groups tend to be involved in, rates of helmet wearing by different age groups, and other factors. The apparent results of increasing crash seriousness with increasing age may also likely reflect to some extent, increasing vulnerability with age, particularly of the oldest age group.

Males consistently accounted for the vast majority (85%) of bicyclists involved in crashes with motor vehicles. These results are consistent with national data.

Although bicycle crashes in North Carolina are most likely to involve bicyclists of White racial background (48% on average), Blacks are involved in almost as many crashes (approximately 43% - Table 6.C). Considering they comprise about 22% of persons living in the State (2000 census data), Blacks are clearly over-represented in bicycle crashes, and Whites are under-represented based on the population (about 72%). There has been a slight decrease in the proportion of crashes involving black bicyclists, from around 44% in 2003 to about 42% in 2006. Asians and Native Americans account for less than ½ % and about 1 ½%, respectively of the total bicyclist crashes.

Since the year 2000, when the state began identifying Hispanics and persons of Asian descent on crash report forms, Hispanics have accounted for about 1 –5% of the bicyclist crashes each year, and a comparable proportion of the population, 4.7% (in 2000).

Table 6.C   Bicyclist by Race by Year

Race	2003	2004	2005	2006
White	364	400	371	331
Black	345	364	337	280
Hispanic	11	17	45	30
Native	31	28	13	12
Asian	9	1	5	7
Other	7	1	3	2
Unknown	9	7	14	5
Total	**776**	**818**	**788**	**667**

Reported helmet use for bicyclists involved in crashes is extremely low, <2% on average. These data are not, however, considered to be extremely reliable since often an injured bicyclist is transported from the crash scene prior to the reporting officer's arrival. Nevertheless we know from a 2002 statewide observational helmet use survey that bicycle helmet use is unacceptably low. Over all ages, helmet use was estimated to be 24% among those riding on streets. Observed use for those 15 and under was, however, only 16%. Use was lowest in the coastal plain region, followed by the Piedmont region, and highest in the mountain region. It is possible that those involved in crashes use helmets at a lower rate than overall.

The investigating officer indicated alcohol use by only about 1% of the bicyclists involved in collisions with motor vehicles over a 5 year period. Indicated use does not necessarily imply that the bicyclist was intoxicated at the time of the crash, only that alcohol use was detected.

Driver use of alcohol was detected for an average of 2% of the drivers involved in collisions with bicyclists over the three year period. This rate is lower than alcohol detection reported for crashes overall over the same period (5.7%).

Roadway and location characteristics of bicyclist crashes
Although approximately 39% of bicyclist crashes occurred at rural locations last year, they are more serious, more often than urban crashes.

> In 2003 and 2004, above 55%, on average, of bicycle – motor vehicle crashes occurred on local streets, likely reflecting more riding in urbanized areas and in neighborhoods. This trend continued in 2006 with 58% of the crashes occurring on local streets. (Table 6.D) There were year-to-year fluctuations, but no obvious trends over time. Nearly 20% of bicycle crashes occurred along state secondary routes (which include the former categories Rural Paved and Rural Unpaved) between 2003 and 2005. In 2006 this had declined slightly to 18%. Around 6 - 7% occurred on US Routes and NC Routes between 2003 and 2005 but increase to almost 20% in 2006.

Crash severity also tends to vary by roadway classification, as might be expected, with higher proportions of struck bicyclists being killed on interstate routes, U.S., NC, and state secondary routes than on local streets or Public Vehicular Areas (PVA)

The majority of reported bicyclist roadway crashes occurred on two-lane roads, while approximately 29% occurred on roadways with four or more through travel lanes (fig. 6.D). These trends were largely consistent from year-to-year

Understanding the location characteristics of crashes (both numbers and severity) can help in determining where to direct resources and countermeasures. Additional information by county will also be provided below

Table 6.D   **Bicycle Injury by Road class**
(Jan 2006 through Dec 2006)

Road class	Fatal	Injury	PDO	Total
Interstate	0	6	0	6
US	1	66	0	67
NC	4	57	2	63
SSR	7	114	2	123
Local Street	5	370	11	386
Private road/drive	0	2	1	3
PVA	1	11	0	12
Total	**18**	**626**	**16**	**660**

Crash types
As with pedestrian crashes, the development of effective countermeasures to help prevent bicyclist crashes is aided by an understanding of events leading up to a crash and contributing factors. Analysis of the data from state crash report forms that are stored in electronic databases can provide information on *where* bicyclist-motor vehicle crashes occur (city street, two-lane roadway, intersection location, etc.), *when* they occur (time of day, day of week, etc.), and *to whom* they occur (age of victim, gender, level of impairment, etc.), but can provide very little information about the actual sequence of events leading to the crash.

Each identified crash type is defined by a specific sequence of events, and each has precipitating actions, predisposing factors, characteristic locations, and sometimes characteristic populations, that can be targeted for interventions.

Factors that may contribute to bicycle crashes with motor vehicles include the position and direction the bicyclist is riding. As vehicles, bicyclists should travel in the direction of other vehicular traffic. Motorists do not expect bicyclists to be approaching from the right, nor do they expect them on the sidewalk.

- Thirty-three percent of those involved in crashes with motor vehicles, and for whom this information was relevant (i.e., they were not on PVAs, driveways, trails, or other off-road areas) were riding facing traffic.
- 8% were riding on the sidewalk.
- And when bicyclists involved in crashes were reported to be riding on the sidewalk, in more than ¾ of the occasions they were also riding against the direction of traffic (fig. 6.10).
- When riding on the street in either a shared lane or bike lane or shoulder, bicyclists involved in crashes with motor vehicles were riding against traffic 24% and 31% of the time, respectively.
- Adults were about equally as likely as children to be riding facing traffic.

Over the most recent three years of data, the five crash groups responsible for the highest proportions of crashes in NC (not including "Other" which includes a variety of crash types) were the following types:

- Sign-controlled intersection   - 19.8%
- Bicyclist turn / merge   - 13.5%
- Bicyclist ride-out - mid-block   - 11.8%
- Motorist overtaking   - 11.7%
- Motorist turn / merge   - 9.8%

- The above five groups accounted for two-thirds of the bicycle – motor-vehicle crashes in NC.

Counties

From 2003 through 2005 the ten highest crash rate counties accounted for only 19% of the states bicycle crashes. In 2006, the nine highest crash rate counties accounted for 55% of the states bicycle crashes. This would tend to indicate that bicycling is becoming more popular in the urban areas. This is something that will need to be watched in future data collections.

Table 6.F **Bicyclist by County by Year**				
County	**2003**	**2004**	**2005**	**2006**
Alamance	5	14	9	14
Alexander	0	2	0	0
Alleghany	0	0	0	0
Anson	4	1	2	0
Ashe	0	0	0	1
Avery	0	0	0	0
Beaufort	6	12	14	7
Bertie	0	2	1	0
Bladen	2	3	4	0
Brunswick	6	8	7	4
Buncombe	22	14	30	21
Burke	4	0	5	3
Cabarrus	12	2	18	6
Caldwell	2	5	2	4
Camden	1	0	2	0
Carteret	5	8	11	12
Caswell	0	2	3	0
Catawba	10	8	20	8
Chatham	5	3	2	2

Cherokee	0	1	0	1
Chowan	0	1	3	1
Clay	0	0	0	1
Cleveland	4	4	10	3
Columbus	8	3	7	4
Craven	6	15	15	6
Cumberland	38	35	41	27
Currituck	0	5	4	1
Dare	19	9	19	7
Davidson	8	7	14	5
Davie	0	1	2	2
Duplin	3	5	2	4
Durham	21	20	42	23
Edgecombe	14	9	16	11
Forsyth	20	34	34	20
Franklin	4	3	2	1
Gaston	14	29	25	11
Gates	2	1	0	0
Graham	0	1	1	0
Granville	3	4	3	2
Greene	1	1	0	2
Guilford	51	63	105	68
Halifax	7	9	4	2
Harnett	8	9	9	9
Haywood	4	0	3	1
Henderson	5	8	5	1
Hertford	3	4	1	2
Hoke	0	4	4	0
Hyde	1	1	1	2
Iredell	14	12	19	7
Jackson	0	0	0	1
Johnston	9	9	18	11
Jones	0	1	1	1
Lee	4	6	7	4
Lenoir	12	9	14	7
Lincoln	1	1	1	1
Macon	0	0	0	3
Madison	2	0	0	0
Martin	3	2	6	1
McDowell	2	0	1	1
Mecklenburg	66	91	123	83
Mitchell	0	0	1	0
Montgomery	0	3	1	1
Moore	0	1	9	5
Nash	11	6	23	7
New Hanover	50	37	70	25
Northampton	1	2	0	1
Onslow	16	23	24	14
Orange	16	15	45	17
Pamlico	0	1	0	1
Pasquotank	8	4	5	0
Pender	1	2	5	0
Perquimans	2	0	0	1
Person	0	1	2	0
Pitt	24	25	8	6
Polk	0	0	0	0
Randolph	13	6	4	11

Richmond	6	7	5	2
Robeson	20	21	40	22
Rockingham	8	5	9	7
Rowan	14	7	10	8
Rutherford	2	2	5	2
Sampson	4	5	5	1
Scotland	9	11	13	2
Stanly	6	4	5	0
Stokes	2	0	2	3
Surry	1	4	6	5
Swain	0	0	3	0
Transylvania	0	2	1	0
Tyrrell	0	0	0	0
Union	13	6	15	5
Vance	0	1	3	1
Wake	69	77	113	79
Warren	0	0	2	0
Washington	1	3	4	0
Watauga	6	3	4	0
Wayne	15	11	18	10
Wilkes	2	3	2	1
Wilson	13	19	20	10
Yadkin	2	0	0	0
Yancey	0	0	0	1
State Total	776	818	1174	667

Summary of findings
As with pedestrian crashes, bicycle – motor vehicle crashes are a low percentage of overall crashes. But when collisions between bikes and motor vehicles occur, they are often serious with 2.7% of those struck being killed and another 94.8% being injured. More crashes occur in urbanized areas and on local streets, but rural crashes tend to be more serious, likely because more occur on higher speed roadways, predominantly state secondary roads.

When motorists drove out into the path of a bicyclist, the cyclist was most often traveling against the direction of traffic. Wrong-way riding was also implicated in Signal-controlled intersection crashes as well as Motorist drive-out – mid-block crashes. All of these crash types occur most often in urban areas. Sidewalk riding is particularly over-represented in Signal-controlled intersection crashes as well as Motorist turn / merge crashes.

Reducing crashes involving crossing paths and turning vehicles is a challenge. Obviously, reducing sidewalk riding and wrong-way riding should help to reduce certain crash types, particularly those involving motorists pulling out to turn right at intersections or mid-block locations. Calming intersections by tightening turn radii, enhancing intersection markings, and other measures may help to reduce turning vehicle crashes. Replacing traditional intersections with low-speed roundabouts or mini-traffic circles could help to reduce the frequency and severity of intersection crashes with bicycles by forcing slow speeds through intersections and reducing the overall number of conflict points. Consideration must be given, however, to the best way to accommodate bicycles through a traffic circle – particularly if multiple lanes are involved.

Children were most often involved in mid-block ride out crashes, also more typically occurring in urban areas, but proportional to the overall urban crash rate. Calming speeds on local streets is one recommended countermeasure for this crash problem.

Crashes that occurred in a greater proportion in rural areas than urban, include Motorist overtaking crashes, and Bicyclist turn / merge crashes (about 61% each). Adults were over-represented in the former and youth, 11 – 15 were over-represented in the latter. Many of the bicyclists turn / merge crashes involving young riders crashes seem to involve the bicyclist changing lanes to avoid an overtaking vehicle. In particular, narrow, high speed roadways in rural areas need improvements to help bicyclists. Providing space on the roadway for bicyclists through adding paved shoulders, and in urban areas, through bike lanes or wide outside lanes, and educating motorists and bicyclists about traffic rules, proper passing, and sharing the road are countermeasures for these two problems. Lower speeds would also help, since rapidly overtaking motor vehicles may have insufficient time to slow to wait for an appropriate gap to pass. Lower speeds also would assist bicyclists that have legitimate need to change lanes or turn, to merge with traffic.

Reducing speeds would help all crash types, since lower speeds help motorists to avoid crashes and also reduces the seriousness if a crash does occur. Lower speeds would help to create, not only a safer bicycling environment, but a more welcoming one.

Although ideally, most bicycle crashes would be prevented through implementation of appropriate countermeasures, when a crash does occur, a properly used safety helmet provides the best protection from serious and fatal injuries. Helmet use is very low in NC, only 24% over all, and even lower among children and the 11 to 15 year group most involved in crashes. Efforts to strengthen support of the statewide helmet law, and promote greater helmet use are therefore strongly recommended.

As public health agencies are increasingly advocating for more active forms of transportation, i.e. bicycling and walking, demand for safe multi-modal roadways will increase over the coming years. Adult bicycling already seems to be on the rise. Providing for the needs of bicyclists and pedestrians on the states roadways should be a key priority over the next period of road-building and improvements.

7. OLDER DRIVER SAFETY

Introduction

Over 42,000 drivers age 60 or older were reported to have been involved in reported crashes in North Carolina in 2006. This number includes a large number of drivers age 75 or older. Older adults are of particular interest because:

1) Their numbers are increasing, and can be expected to continue to increase over the next 30+ years. Whereas the overall North Carolina population is projected to increase 46% by 2030, the age 60+ population will more than double, from just over 1 million to 2.2 million persons age 60+.

2) Declining functional abilities and health in older adults contribute to increased crash rates per mile driven. Only 16-19-year-old drivers have higher overall crash rates than do drivers age 80+.

3) Once in a crash, older adults are much more vulnerable to injury. Despite their generally lower speeds and less severe crashes, older adults are 4 to 6 times more likely to die as a result of their crash.

This section highlights characteristics of older driver crashes in North Carolina and identifies potential approaches for improving the safety of this vulnerable population.

Older Drivers Involved in Crashes
On average over the past year, 11.6% of crash-involved drivers in North Carolina were age 60 or older (see Table 7.A). This is pretty much in line with their 11.9% representation in the overall population.

Information on the injury status of drivers involved in crashes is shown in Table 7.A. In 2006 we find that the 60 and over age group accounts for only 10-12% of the injuries and PDO crashes but is overrepresented in the fatal category at 21.8%. These percentages have fluctuated across crash years, due to the relative rarity of severe and fatal injuries, coupled with the relatively small numbers of crash-involved drivers in the oldest age categories.

Table 7A   Age Group by Injury Level
(Jan 2006 through Dec 2006)

Age Group	Fatal	Col %	A	Col %	B+C	Col %	PDO	Col %	Unknown	Col %	Total	Col %
24 or less	225	22.2%	724	29.1%	21822	28.1%	76218	27.2%	1197	27.6%	100186	27.4%
25 - 39	269	26.6%	752	30.2%	24187	31.1%	88003	31.4%	1449	33.5%	114660	31.3%
40 - 59	298	29.4%	759	30.5%	23116	29.7%	83106	29.7%	1165	26.9%	108444	29.6%
60 and above	221	21.8%	252	10.1%	8692	11.2%	32904	11.7%	510	11.8%	42579	11.6%
Unknown							1	0.0%	9	0.2%	10	0.0%
Total	1,013	100.0%	2,487	100.0%	77,767	100.0%	280,232	100.0%	4,330	100.0%	365,879	100.0%

Key Findings

- The number of crash-involved older drivers has shown only modest increases over the past 3 years. ("Baby boomers" have not yet entered the ranks of older drivers.)

- Once involved in a crash, older drivers are more likely than their younger counterparts to be severely injured or killed.

- Although drivers ages 65+ make up only 7.5% of the crash-involved driver population, they comprise 15% of fatally-injured drivers.

Temporal Characteristics of Older Driver Crashes
Three out of four crashes involving older drivers occurred between the hours of 10:00 a.m. and 6:00 p.m., and older drivers were especially overrepresented in crashes between 10:00 a.m. and 2:00 p.m. Very few, only about two percent, occurred at nighttime after 10:00 p.m. Again, these findings reflect the times when older adults are most likely to be on the road driving. As drivers age, this pattern of midday crashes becomes even more pronounced.

Older driver crashes are also more likely to occur on weekdays, although here the differences are relatively small. Overall in North Carolina, 78% of crashes occurred on weekdays (Monday – Friday) and 22% on weekends (Saturday or Sunday). For drivers ages 65+, 81% occurred on weekdays and 19% on weekends.

Key Findings

- Not surprisingly, older drivers tend to be involved in crashes during midday hours and on weekdays, reflecting the times they are most likely to be driving.

Roadway and Locational Characteristics of Older Driver Crashes

Overall, 62% of North Carolina crashes occur in the state's more highly populated Piedmont counties, 26% in its eastern coastal counties, and only 12% in its western mountain region counties. However, the western part of the state is home to a disproportionate number of older adults, and this is reflected in their crash data. With increasing age, the percentage of crashes occurring in the Mountain region counties increases, while the percentage occurring in the Piedmont counties declines. For drivers ages 85+, nearly one in five crashes (19%) are in the western Mountain region of the state.

Although older adults are under represented in crashes in the more urban Piedmont counties, their crashes are about equally likely to occur in urban areas, and increasingly so with age. Again, this likely reflects their greater exposure to potential crashes in urban driving environments and on urban roadways.

As drivers age, they are much less likely to be involved in crashes on Interstate and Secondary State Roads. Conversely, they are more likely to be involved in crashes on U.S. Route roadways and on local streets. Their crashes are also somewhat more likely to occur on private roadways, in parking lots, and so forth, especially for the oldest drivers.

Information with respect to the speed limits on roads mimics that of road type, with older drivers less likely to be involved in crashes on higher speed roadways, and more likely to be involved in crashes on lower speed roadways of 35 mph or less.

The crashes of older drivers are also much more likely than those of younger drivers to occur at intersections and especially those involving stop sign controls. .

Key Findings

- Nearly one in five drivers killed in crashes in the western Mountain region of the state is age 65+. As the North Carolina population ages, this proportion will rise, not only in western North Carolina but in all parts of the State.

- For the most part, older driver crashes tend to mimic the locations and situations where older adults drive, (i.e., on shorter trips, lower speed roadways, about town, during the daytime, under favorable weather conditions, etc.). Without more detailed driving exposure data, however, it is not possible to identify what driving situations pose the greatest risk for older drivers. For example, without knowing how many miles older adults drive on interstate roadways or at nighttime, it is not known whether these situations pose greater risk to their safety.

Maneuvers, Contributing Factors, and Physical Conditions in Older Driver Crashes

The majority of all drivers (57%) are going straight ahead when they crash. Older drivers, however, are less likely to be going straight ahead and much more likely to be making a left turn. In fact, older drivers are nearly twice as likely as younger drivers to be engaged in a left turn maneuver at the time of their crash. Other types of maneuvers where older drivers are overrepresented include right turns, changing lanes, and starting in the roadway (e.g., when starting up at a green light).

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Like the youngest drivers, older drivers are more likely to be cited for one or more contributing factors to their crash. At least by this measure, middle-aged drivers, ages 45-64, are the "safest" drivers on the road. Moreover, the likelihood of contributing to their crash increases with age. Nearly four out of five crash-involved drivers age 85 or above were cited for some contributing factor to their crash.

Based on the first contributing factor noted when more than one factor is cited, failure to reduce speed is the most frequently cited contributing factor, but is most prominent for drivers in the younger two age categories. For older adults, by far the most commonly cited contributing factor is failure to yield. While only cited for 17.6% of drivers overall, it is cited for 31% of drivers ages 65-74, increasing to 41% for drivers ages 85+. Other contributing factors that are over represented among older drivers include improper turning, disregard of traffic signal, and disregard of stop or yield signs (primarily the former). In contrast, older drivers are less likely to be cited for speeding, careless/aggressive driving, alcohol or drug use, or following too closely.

A final "crash characteristic" factor examined is the driver's physical condition at the time of the crash. Although in reality a driver variable, this variable can provide insight into potential causative factors in crashes. Although the vast majority of older drivers are identified as being in a "normal" physical condition at the time of their crash, they are more likely to be impaired by a medical condition or by some other physical impairment. Interestingly, even though older adults are much greater consumers of medications, medication use does not appear in these data to be a factor in their crashes.

Key Findings
- Drivers ages 65+ are more likely to crash while making a left turn, and the crash risk increases along with their age.

- Older drivers are more likely to be cited for contributing to their crash, with the most commonly cited contributing factor being failure to yield to other traffic.

Conclusions
In terms of number of crashes, older adults do not yet represent a significant safety problem in North Carolina. However, this situation will change over the next decade as the large swell of baby boomers hits retirement age. Based on population growth alone, older driver crashes will more than double over the next 25 years. Older adults are by far the fastest growing segment of the North Carolina population.

If one is concerned about reducing traffic fatalities, older drivers already demand attention. The data analysis showed that while older adults represent 7.5% of all crash-involved drivers, they represent 15% of drivers killed in crashes. They also represent about 15% of pedestrians killed in crashes.

To reduce these numbers, most safety experts recommend a comprehensive approach that includes improvements to the driving environment (e.g., roadway markings, signage, traffic control, etc.), driver licensing practices (e.g., increased screening and licensing restrictions based on driver functional abilities), driver training and rehabilitation (e.g., driver refresher courses, adaptive vehicle equipment), increased public awareness, improved vehicle design, and greater access to alternative modes of transportation. Many excellent materials and resources exist.

8. SPEED-RELATED CRASHES

Driver speed is a function of several factors, e.g., posted speed limits, alignment, lane and shoulder width, design speed, land use, surrounding land use, traffic volumes, percentage of trucks in the traffic stream, weather, time of day, enforcement, visibility, vehicle operating characteristics, and driver factors such as risk taking behavior. Despite several studies that have attempted to establish relationships between driver speed and crash rates, the results are not consistent. Although there is some evidence to indicate that, on a given road segment, crash involvement rates of individual vehicles rise with their speed of travel, it is not clear if across all roads crash involvement rates rise with the average speed of traffic, i.e., we cannot assume that roads with higher average traffic speeds have higher crash rates than roads with lower average traffic speeds. Many have argued that there is a relationship between crash involvement rates and deviation from average speed. Speed is however directly related to the severity of a crash.

In North Carolina, for each driver involved in a crash, the investigating officer can indicate a maximum of three contributing circumstances. These contributing factors are intended to provide information on driver actions that probably lead to their involvement in the crash. These contributing factors are not necessarily listed in any particular order, i.e., it is not necessarily that the first contributing factor was the most critical. There are 31 possible driver contributing factors, and three of these relate to speed: exceeding the posted speed limit, driving too fast for conditions, and failure to reduce speed. It is important to note that it is very difficult to get an objective measure of the true crash speeds of crash-involved vehicles. Numbers are typically based on estimates by the investigating officer and/or self-reports by the driver.

In the following discussion, 'speed related crashes' were identified by selecting all crashes where at least one of the contributing circumstances for at least one of the drivers was coded as exceeding the posted speed limit, driving too fast for conditions, and failure to reduce the speed.

Severity of Speed Related Crashes

Between 10% and 15% of fatal and injury crashes are speed related, whereas, just 4.7% of PDO crashes are speed related (Table 8.A).

Table 8.A   Speed Related Crashes by Severity
(Jan 2006 through Dec 2006)

Severity	Non-Speed Related	Percent of Total	Speed	Percent of Total	Total
PDO	266,928	95.3%	13,304	4.7%	280,232
Injury	71,034	88.5%	9,270	11.5%	80,304
Fatal	603	59.5%	410	40.5%	1,013
Unknown	4,019	92.8%	311	7.2%	4,330
Total	**342,584**	**93.6%**	**23,295**	**6.4%**	**365,879**

Area Type

A higher percentage of crashes in rural areas are associated with speed compared to urban areas (Table 8.B). This is to be expected since roads in rural areas are usually associated with lower traffic volumes and allow speeding.

Table 8.B   Speed Related Crashes By Area Type
(Jan 2006 through Dec 2006)

	Fatal	Injury	PDO	Unknown	Total
Rural	356	7913	10898	175	19342
%	86.8%	85.9%	82.5%	56.5%	83.6%
Urban	54	1294	2306	135	3789
	13.2%	14.1%	17.5%	43.5%	16.4%
Total	**410**	**9,207**	**13,204**	**310**	**23,131**

Driver Age

The under 24 age group is associated with the highest percentage of speed related crashes (Table 8.C). As drivers mature, the percentage of speed related crashes come down. Older drivers are associated with the least number of speed related crashes.

Table 8.C   Driver Age By Speed
(Jan 2006 through Dec 2006)

Age Group	Not Speed Related	Percent of Total	Speed Related	Percent of Total	Total
Age 15 And Under	888	85.5%	151	14.5%	1,039
Age 16	7,020	84.9%	1,248	15.1%	8,268
Age 17	9,407	86.3%	1,493	13.7%	10,900
Age 18	11,382	86.8%	1,731	13.2%	13,113
Age 19	11,029	87.9%	1,512	12.1%	12,541
Age 20	10,600	89.3%	1,276	10.7%	11,876
Age 21-24	38,456	90.6%	3,993	9.4%	42,449
Age 25-29	39,162	92.9%	3,005	7.1%	42,167
Age 30-39	68,637	94.7%	3,856	5.3%	72,493
Age 40-49	60,358	95.7%	2,739	4.3%	63,097
Age 50-59	43,854	96.7%	1,493	3.3%	45,347
Age 60+ or Unknown	41,791	98.1%	798	1.9%	42,589
Total	**342,584**	**93.6%**	**23,295**	**6.4%**	**365,879**

Time of Day

More crashes are speed related between 7:00 and 8:00 a.m., 3:00 and 5:00 p.m., and 1:00 and 3:00 a.m. It is possible that the relative high percentage of speed related crashes between 7:00 and 8:00 a.m. and between 3:00 and 5:00 p.m. is partly due to young drivers who drive to school in the morning and drive from school in the afternoon during these periods but a more likely reason might be adults commuting to and from work each day. The relatively high percentage of speed related crashes between 1:00 and 3:00 a.m. could be associated with alcohol.

Month of Year

In the last three years, January has seen a significant increase in the percentage of crashes that are speed related. It is not clear if this is a random variation or a systematic change in the pattern for speed related crashes.

Day of Week

Friday is associated with the highest number of speed related crashes. However, Fridays are also associated with the highest number of crashes. The percentage of speed related crashes are quite uniform over different days of the week.

Road Class

Interstate highways are associated with the highest speeds because they are designed to the highest standards. The information in (Table 8.D) shows that the highest number and percentage of speed related crashes occurs on SSR's. Local streets have the next highest number of speed related crashes.

Table 8D   Speed Related Crashes By Road Type
(Jan 2006 through Dec 2006)

Road Class	Fatal	Injury	PDO	Unknown	Total
Interstate	21	718	2,039	11	2,789
US	46	1,190	2,236	29	3,501
NC	69	1,299	1,549	30	2,947
SSR	220	4,706	5,074	105	10,105
LCL	54	1,255	2,233	127	3,669
PP	0	13	15	2	30
PVA	0	20	43	6	69
Other	0	6	15	0	21
Total	**410**	**9,207**	**13,204**	**310**	**23,131**

Speed Related Crashes by County

The rate of speed related crashes vary widely across North Carolina counties. There are several factors that may influence why a particular county may have a high or low rate of speed related crashes including: number of young drivers in the county, extent of tourist traffic, and the type of road system in the county including the number of rural roads.

Table 8.E shows the county listing in descending order by each county's speed related crashes shown as a percentage of their total crashes for the 2006 year. This ranking gives a better picture of the problem areas rather than simply looking at a total number. It ranks by action rather than by population.

Table 8 E	Speed Related Crashes by County		
	Descending Order by Percentage		
	(Jan 2006 through Dec 2006)		
County	**Total Crashes**	**Speed Related**	**Percent of Total**
GRAHAM	208	90	43.27%
ALLEGHANY	241	101	41.91%
MADISON	342	119	34.80%
MCDOWELL	762	262	34.38%
JACKSON	899	308	34.26%
POLK	335	108	32.24%
MACON	589	176	29.88%
HAYWOOD	1,085	315	29.03%
PERQUIMANS	212	60	28.30%
SWAIN	202	57	28.22%
TRANSYLVANIA	513	132	25.73%
CLAY	164	42	25.61%
JONES	324	74	22.84%
WARREN	328	73	22.26%
ALEXANDER	540	117	21.67%
AVERY	335	72	21.49%
CHEROKEE	433	90	20.79%
STOKES	900	187	20.78%
MONTGOMERY	491	102	20.77%
GREENE	477	98	20.55%
RUTHERFORD	1,223	250	20.44%
NORTHAMPTON	436	87	19.95%
YANCEY	268	53	19.78%
PAMLICO	243	48	19.75%
MARTIN	580	114	19.66%
SURRY	1,617	302	18.68%
WASHINGTON	279	52	18.64%
DAVIE	883	162	18.35%
YADKIN	738	134	18.16%
MITCHELL	303	55	18.15%
COLUMBUS	1,603	290	18.09%
PERSON	831	150	18.05%
CASWELL	412	74	17.96%
ROBESON	3,559	625	17.56%
SCOTLAND	610	106	17.38%
HYDE	129	22	17.05%
ASHE	610	102	16.72%
RANDOLPH	3,263	545	16.70%
HOKE	707	117	16.55%
WILKES	1,430	234	16.36%
GATES	261	42	16.09%
BURKE	2,039	325	15.94%
DAVIDSON	3,514	560	15.94%
FRANKLIN	1,162	183	15.75%
ROCKINGHAM	2,114	328	15.52%
RICHMOND	928	140	15.09%

SAMPSON	1,536	230	14.97%
WATAUGA	1,316	197	14.97%
HENDERSON	2,462	365	14.83%
BLADEN	858	127	14.80%
DUPLIN	1,554	230	14.80%
CLEVELAND	2,238	330	14.75%
JOHNSTON	3,893	571	14.67%
ANSON	655	96	14.66%
EDGECOMBE	1,284	188	14.64%
BRUNSWICK	2,256	329	14.58%
BERTIE	512	74	14.45%
NASH	2,563	366	14.28%
HARNETT	2,037	290	14.24%
CHOWAN	232	33	14.22%
CAMDEN	135	19	14.07%
ORANGE	2,813	392	13.94%
CALDWELL	1,613	211	13.08%
PENDER	1,332	169	12.69%
LINCOLN	1,574	193	12.26%
WAYNE	2,564	314	12.25%
GRANVILLE	964	118	12.24%
BUNCOMBE	5,213	637	12.22%
STANLY	1,121	134	11.95%
HALIFAX	1,234	146	11.83%
WILSON	2,154	253	11.75%
CHATHAM	1,263	146	11.56%
CRAVEN	1,873	211	11.27%
IREDELL	3,777	423	11.20%
ONSLOW	3,821	425	11.12%
HERTFORD	470	51	10.85%
CARTERET	1,334	143	10.72%
CURRITUCK	360	38	10.56%
ROWAN	3,205	337	10.51%
VANCE	1,101	115	10.45%
UNION	3,874	401	10.35%
LENOIR	1,417	145	10.23%
LEE	1,605	161	10.03%
GASTON	4,968	495	9.96%
TYRRELL	121	12	9.92%
MOORE	1,777	175	9.85%
PASQUOTANK	826	78	9.44%
BEAUFORT	1,135	107	9.43%
CUMBERLAND	7,709	693	8.99%
FORSYTH	8,205	696	8.48%
ALAMANCE	3,568	299	8.38%
DARE	736	60	8.15%
CATAWBA	4,286	345	8.05%
GUILFORD	11,256	848	7.53%
PITT	4,234	288	6.80%
CABARRUS	4,062	273	6.72%
DURHAM	7,953	480	6.04%
MECKLENBURG	23,896	1,422	5.95%
WAKE	22,829	1,326	5.81%
NEW HANOVER	5,335	247	4.63%
State Total	220,231	24,135	10.96%

Summary of Findings

- Speed-related crashes are in general more severe compared to non-speed-related crashes.

- Speed-related PDO crashes have increased substantially in the last two years. However, the number of injury and fatal speed-related crashes has changed very little during this period.

- A higher percentage of crashes in rural areas are associated with speed compared to urban areas.

- The 15-20 age group is associated with the highest percentage of speed-related crashes.

- A large number of speed related crashes occur during the morning peak, the afternoon peak, and between 1:00 and 3:00 a.m.

- Interstates have the lowest number of speed-related crashes, but the highest percentage of speed-related crashes. NC routes and SSN's have the highest number of speed-related crashes, but the lowest percentage of speed-related crashes.

- Close to 80% of crashes where a rear-end crash was the first harmful event, are speed-related. A significant percentage of crashes (close to 50%) where the first harmful event is a Jackknife/Overturn/Rollover, collision with a fixed object, or ran-off-the-road, are speed-related.

Enforcement and Public Information

Enforcement will be an effective speed management tool as long as the posted speed limits are credible. The problem with traditional enforcement is their short-lived effect in deterring speeding. It may be possible to boost the longevity of the deterrence effect if it is through a public information campaign coupled with enforcement. It would be worthwhile to target enforcement efforts on those roads and times when speed-related crashes are most common. Automated enforcement (e.g., photo radar) can be used to complement traditional enforcement techniques.

9. OCCUPANT RESTRAINT
Seat-belt usage in North Carolina is among the highest in the nation due to the primary enforcement law and successful 'Click It or Ticket' and 'RU Buckled' campaigns. The observed driver seat belt usage rate has increased from approximately 65% in the early 1990's to 89.8% in 2008.

Each year, GHSP conducts statewide a survey to determine the safety belt usage rates for the state. This survey is conducted in accordance with NHTSA guidelines and policy. The latest survey was conducted following the Memorial Day 2008 campaign. The usage rate for drivers at that time was determined to be 90.4%. The corresponding usage rate for passengers was 85.5%.

Typically, the Piedmont and Coastal areas have a higher belt usage rate compared to the Mountain region. This year there was a shift in the usage rates during the Memorial Day survey. The usage rate in the Piedmont region was 91.0% and the Mountain Region was 91.3% while the Coastal region was 88.0% during this survey. Cars and SUVs, again have the highest usage rates – both over 90.0% during the Memorial Day survey. The usage rates also increase with increase in age: middle-aged and older drivers typically having a higher usage rate compared to young drivers. There is a significant difference in the seat belt usage rates among men and women. The latest survey found that approximately 91.9% of women used a seat belt while 88.9% of men used a seat belt.

Restraint usage in crashes
The investigating officer provides information on restraint usage for individuals involved in a crash. Based on 2003 North Carolina Traffic Crash Facts, over 97% of drivers involved in a crash in 2003 had used a belt. Unfortunately, this information does not match the usage rate that is estimated from the statewide surveys. It is possible that in many cases, especially in PDO crashes, the investigating officer asks the driver or passenger if they were using a seat belt and a significant number of people who were not wearing a seat belt would probably not admit to their non-compliance. In the case of fatal crashes, a more detailed investigation is usually conducted, and can provide more accurate information on whether a seat belt was used when the crash occurred. According to the 2003 North Carolina Traffic Crash Facts, close to 58% of drivers who were killed in a crash were wearing a seat belt (low enforcement reported). For A level injuries, the corresponding usage rate was around 97% (self reported). For B and C injuries, and the No-Injury cases, the usage rate was between 89% and 99% (self reported).

Table 1.   North Carolina Seat Belt Usage Rates, Unweighted & Weighted: 121-Site June 2008 Survey

Category	Unweighted Use %	Weighted Use %	Weighted SE %	Sample Size
Overall				
Driver	89.9	**90.4**	0.8	19,921
Passenger	85.5	**85.5**	1.7	4,348
Combined	89.1	**89.8**	0.8	24,269
Urban/Rural				
Urban	90.1	**90.4**	0.8	12,857
Rural	89.6	**90.1**	2.1	7,064
Region				
Mountain	92.0	**91.3**	1.0	3,446
Piedmont	89.1	**91.0**	0.8	8,809
Coast	90.0	**88.0**	1.8	7,666
Vehicle Type				
Car	91.2	**91.4**	1.0	10,131
Van	85.9	**84.4**	4.7	495
Minivan	93.3	**93.6**	1.3	1,202
Pickup Truck	84.6	**86.1**	1.6	3,871
Sport Utility	91.4	**91.0**	1.4	4,079
Sex of Driver				
Male	87.4	**88.9**	2.2	2,891
Female	92.5	**91.9**	1.6	2,288
Race/Ethnicity of Driver				
White	90.0	**91.2**	1.3	3,963
Black	87.8	**85.8**	3.2	948
Hispanic	92.0	**96.0**	1.5	176
Native American	[a]	[a]	[a]	25
Asian	[a]	[a]	[a]	56
Age of Driver				
16–24	85.4	**86.9**	2.6	691
25–44	89.5	**90.5**	1.6	2,854
45–64	91.2	**89.5**	3.1	1,289
65+	94.1	**98.0**	0.6	355

[a] Estimates and standard errors are suppressed due to small sample size.

Table 2. North Carolina Seat Belt Usage Rates by County, Weighted: 121-Site June 2008 Survey

County Name	Driver (Standard Error)	Passenger (Standard Error)	Combined (Standard Error)	Sample Size
Overall	**90.4** **(0.8)**	**85.5** **(1.7)**	**89.8** **(0.8)**	19,921
Alamance	89.2 (1.4)	85.7 (3.6)	88.9 (1.4)	1,408
Buncombe	91.5 (1.1)	84.7 (3.1)	90.5 (1.1)	1,113
Burke	91.5 (1.2)	90.8 (2.0)	90.9 (1.2)	1,303
Craven	95.7 (0.7)	91.1 (2.1)	95.2 (0.7)	1,521
Cumberland	86.3 (1.3)	80.6 (3.1)	85.5 (1.3)	1,520
Gaston	84.5 (1.2)	79.7 (2.6)	83.6 (1.2)	1,532
Granville	84.3 (1.7)	75.7 (4.5)	83.4 (1.7)	1,078
Mecklenburg	88.4 (1.1)	81.8 (3.9)	88.1 (1.1)	1,826
New Hanover	89.7 (1.0)	85.3 (2.7)	89.2 (1.0)	1,542
Pitt	92.1 (1.0)	86.9 (2.8)	91.6 (1.0)	1,250
Robeson	78.7 (2.1)	70.6 (4.2)	77.2 (2.1)	798
Stanly	87.4 (1.6)	80.6 (4.7)	87.2 (1.6)	1,095
Wake	94.4 (0.8)	91.3 (2.8)	94.2 (0.8)	1,870
Wayne	90.3 (1.2)	88.6 (2.4)	89.5 (1.2)	1,035
Wilkes	92.2 (1.1)	88.8 (2.1)	91.6 (1.1)	1,030

Table 3.   Observed Seat Belt Use in North Carolina (%), Weighted

Survey Periods	Driver (D)	Passenger (RF)	Combined (D+RF)
1998			
Jun[1]	82.2	79.2	81.7
Sep[1]	82.0	77.0	81.0
Oct[2]	77.7	72.7	76.7
1999			
Apr[1]	81.0	77.7	79.9
Jun[1]	83.5	80.8	82.3
Nov[2]	79.7	71.0	78.6
2000			
Jun[3]	81.6	76.1	80.5
Sep[3]	80.3	74.7	79.2
2001			
May[3]	80.9	74.8	79.6
Jun[3]	83.6	79.1	82.7
Sep[3]	83.0	77.3	81.9
2002			
Jun[3]	84.9	80.6	84.1
Sep[3]	84.5	76.5	82.7
2003			
Apr[3]	85.1	79.2	84.1
Jun[3]	87.3	81.0	86.1
Sep[3]	85.7	80.4	84.7
2004			
Apr[3]	85.2	79.1	83.8
Jun[6]	87.4	74.7	85.4
2005			
Apr[5]	86.2	82.2	85.4
Jun[4]	86.9	85.6	86.7
2006			
Apr[6]	87.6	84.4	86.9
Jun[4]	88.9	86.3	88.5
2007			
Apr[6]	87.4	74.7	85.4
Jun[6]	89.4	84.7	88.8
2008			
Apr[6]	89.4	82.8	88.4
Jun[6]	90.4	85.5	89.8

[1] This survey was conducted at 72 sites.
[2] This survey was conducted at 306 sites.
[3] This survey was conducted at 152 sites.
[4] This survey was conducted at 121 sites.
[5] This survey was conducted at 50 sites.
[6] This survey was conducted at 50 sites.

Table 4.   **Seat Belt Use Trends in North Carolina (%), Weighted**

	2005		2006		2007		2008	
	Apr[2]	Jun[4]	Apr[3]	Jun[4]	Apr[3]	Jun[4]	Apr[3]	Jun[4]
Overall (D+RF) Rate	85.4	86.7	86.9	88.5	85.4	88.8	88.4	89.8
Region								
Mountains	*	85.6	86.7	88.2	88.7	90.6	90.4	91.3
Piedmont	*	87.1	89.1	90.2	87.5	88.7	89.4	91.0
Coast	*	87.0	84.5	85.8	85.8	90.9	88.5	88.0
Vehicle Type								
Car	88.8	89.8	90.0	91.2	88.6	90.4	90.3	91.4
Van	71.4	65.1	63.6	85.5	80.4	87.1	81.6	84.4
Pickup	78.8	78.2	79.7	78.9	83.3	84.0	80.7	86.1
Sport Utility	88.0	86.5	89.5	91.5	87.8	90.2	92.5	91.0
Sex of Driver								
Male	81.6	82.8	84.7	89.2	85.7	87.4	89.8	88.9
Female	92.8	92.7	92.6	93.7	93.9	94.7	92.0	91.9
Age of Driver								
16–24	85.8	81.0	86.1	92.0	94.1	88.8	95.6	86.9
25–44	84.7	85.6	88.1	90.4	88.7	89.6	89.8	90.5
45–64	85.0	88.9	91.1	92.6	86.0	91.7	91.2	89.5
65+	95.0	97.8	91.5	90.7	68.4	87.7	77.5	98.0
Race/Ethnicity								
White	85.6	86.9	88.3	90.6	89.2	90.9	90.1	91.2
Black	80.1	86.9	83.2	89.3	89.9	87.4	94.6	85.8
Hispanic	83.7	86.3	97.0	93.5	92.2	99.3	96.2	96.0

[1] This survey was conducted at 152 sites.

[2] This survey used a 50-site baseline.

[3] This survey used an updated 50-site baseline.

[4] This survey was conducted at 121 sites.

* Weighted values are not available.

10. Commercial Motor Vehicles (CMV)

Table 10.A	CMV Crashes vs. All Vehicles Crashes (All Occupants)				
(Jan 2006 through Dec 2006)					
Type Crash	Number of CMV Crashes	Percent of Total CMV Crashes	Number All Vehicle Crashes	Percent of Total Vehicle Crashes	CMV as a Percent of Total Crashes
PDO	24,412	79.99%	280,232	76.59%	8.71%
Injury	5,709	18.71%	80,304	21.95%	7.11%

Findings

- It is apparent that due to their size and weight, CMV involved crashes are more violent as they represent 8.34% of all crashes in NC, but account for 16.39% of all fatalities in NC.
- It is also apparent that the when another vehicle is involved in a crash with a CMV that the occupants of that other vehicle are at higher risk of injury or death as 86% of the fatalities were in the other vehicle.

Table 10.B		CMV Crashes by Road Class and Injury (All Vehicles All Passengers)						
(Jan 2006 through Dec 2006)								
Road	Fatal	A Injury	B Injury	C Injury	No Injury	Unknown	Total	Percent
Interstate	23	38	240	856	5318	15	6490	21.27%
US Route	47	63	390	949	4780	48	6277	20.57%
NC Route	52	65	282	721	3764	31	4915	16.10%
State Secondary Rte	29	44	307	608	3288	13	4289	14.05%
Local Route	14	34	208	888	6945	119	8208	26.89%
Public Vehicle Area	1	1	0	9	220	5	236	0.77%
Other /unknown	0	0	0	6	97	1	104	0.34%
Total	**166**	**245**	**1,427**	**4,037**	**24,412**	**232**	**30,519**	**100.00%**

Findings

- Even though the highest percentage (26.89%) of CMV involved crashes occur on local routes, the higher number of fatalities (77.1%) and "An" injuries (70.2%) occur on US, NC, and State secondary routes, which are typically two lane and higher speed limits, yet still have high incidence of intersections/access areas.

Table 10.C	Type CMV by Crash Involvement	
Jan 2006 through Dec 2006		
CMV Type	Number	Percent
2 Axle, 6 Tire	4287	32.19%
3 Axle	1723	12.94%
Truck/Trailer	1695	12.73%
Tractor	279	2.09%
Tractor/Semi-Trl	4808	36.10%
Tractor/Doubles	110	0.83%
Unknown CMV	417	3.13%
Total	**13,319**	**100.00%**

Findings

- Tractor/Semi-trailer and 2 axles, 6 tires CMV's seem to be over represented in crashes with 36.1% and 32.2% involved respectfully.

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STATE CERTIFICATIONS AND ASSURANCES

Failure to comply with applicable Federal statutes, regulations and directives may subject State officials to civil or criminal penalties and/or place the State in a high risk grantee status in accordance with 49 CFR §18.12.

Each fiscal year the State will sign these Certifications and Assurances that the State complies with all applicable Federal statutes, regulations, and directives in effect with respect to the periods for which it receives grant funding. Applicable provisions include, but not limited to, the following:

- 23 U.S.C. Chapter 4 - Highway Safety Act of 1966, as amended;

- 49 CFR Part 18 - Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments

- 49 CFR Part 19 - Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals and Other Nonprofit Organizations

- 23 CFR Chapter II - (§§1200, 1205, 1206, 1250, 1251, & 1252) Regulations governing highway safety programs

- NHTSA Order 462-6C - Matching Rates for State and Community Highway Safety Programs

- Highway Safety Grant Funding Policy for Field-Administered Grants

Certifications and Assurances

The Governor is responsible for the administration of the State highway safety program through a State highway safety agency which has adequate powers and is suitably equipped and organized (as evidenced by appropriate oversight procedures governing such areas as procurement, financial administration, and the use, management, and disposition of equipment) to carry out the program (23 USC 402(b) (1) (A));

The political subdivisions of this State are authorized, as part of the State highway safety program, to carry out within their jurisdictions local highway safety programs which have been approved by the Governor and are in accordance with the uniform guidelines promulgated by the Secretary of Transportation (23 USC 402(b) (1) (B));

At least 40 per cent of all Federal funds apportioned to this State under 23 USC 402 for this fiscal year will be expended by or for the benefit of the political subdivision of the State in carrying out local highway safety programs (23 USC 402(b) (1) (C)), unless this requirement is waived in writing;

The State will implement activities in support of national highway safety goals to reduce motor vehicle related fatalities that also reflect the primary data-related crash factors within the State as identified by the State highway safety planning process, including:

- National law enforcement mobilizations,

- Sustained enforcement of statutes addressing impaired driving, occupant protection, and driving in excess of posted speed limits,

- An annual statewide safety belt use survey in accordance with criteria established by the secretary for the measurement of state safety belt use rates to ensure that the measurements are accurate and representative,

- Development of statewide data systems to provide timely and effective data analysis to support allocation of highway safety resources.

The state shall actively encourage all relevant law enforcement agencies in the state to follow the guidelines established for vehicular pursuits issued by the International Association of Chiefs of Police that are currently in effect.

This State's highway safety program provides adequate and reasonable access for the safe and convenient movement of physically handicapped persons, including those in wheelchairs, across curbs constructed or replaced on or after July 1, 1976, at all pedestrian crosswalks (23 USC 402(b) (1) (D));

Cash draw downs will be initiated only when actually needed for disbursement, cash disbursements and balances will be reported in a timely manner as required by NHTSA, and the same standards of timing and amount, including the reporting of cash disbursement and balances, will be imposed upon any secondary recipient organizations (49 CFR 18.20, 18.21, and 18.41). Failure to adhere to these provisions may result in the termination of drawdown privileges);

The State has submitted appropriate documentation for review to the single point of contact designated by the Governor to review Federal programs, as required by Executive Order 12372 (Intergovernmental Review of Federal Programs);

Equipment acquired under this agreement for use in highway safety program areas shall be used and kept in operation for highway safety purposes by the State; or the State, by formal agreement with appropriate officials of a political subdivision or State agency, shall cause such equipment to be used and kept in operation for highway safety purposes (23 CFR 1200.21);

The State will comply with all applicable State procurement procedures and will maintain a financial management system that complies with the minimum requirements of 49 CFR 18.20.

The State highway safety agency will comply with all Federal statutes and implementing regulations relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin (and 49 CFR Part 21); (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps (and 49 CFR Part 27); (d) the Age Discrimination Act of 1975, as amended (42U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970(P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse of alcoholism; (g) §§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§ 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

The Drug-free Workplace Act of 1988 (49 CFR Part 29 Sub-part F):
The State will provide a drug-free workplace by:

a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

b) Establishing a drug-free awareness program to inform employees about:

    1. The dangers of drug abuse in the workplace.

    2. The grantee's policy of maintaining a drug-free workplace.

    3. Any available drug counseling, rehabilitation, and employee assistance programs.

    4. The penalties that may be imposed upon employees for drug violations occurring in the workplace.

c) Making it a requirement that each employee engaged in the performance of the grant be given a copy of the statement required by paragraph (a).

d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will

    1. Abide by the terms of the statement.

    2. Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction.

e) Notifying the agency within ten days after receiving notice under subparagraph (d) (2) from an employee or otherwise receiving actual notice of such conviction.

f) Taking one of the following actions, within 30 days of receiving notice under subparagraph (d) (2), with respect to any employee who is so convicted

1. Taking appropriate personnel action against such an employee, up to and including termination.

2. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by Federal, State, or local health, law enforcement, or other appropriate agency.

g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e), and (f) above.

BUY AMERICA ACT
The State will comply with the provisions of the Buy America Act (23 USC 101 Note) which contains the following requirements:

Only steel, iron and manufactured products produced in the United States may be purchased with Federal funds unless the Secretary of Transportation determines that such domestic purchases would be inconsistent with the public interest; that such materials are not reasonably available and of a satisfactory quality; or that inclusion of domestic materials will increase the cost of the overall project contract by more than 25 percent. Clear justification for the purchase of non-domestic items must be in the form of a waiver request submitted to and approved by the Secretary of Transportation.

POLITICAL ACTIVITY (HATCH ACT)
The State will comply with the provisions of 5 U.S.C. §§ 1501-1508 and implementing regulations of 5 CFR Part 151, concerning "Political Activity of State or Local Offices, or Employees".

CERTIFICATION REGARDING FEDERAL LOBBYING
Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub-award at all tiers (including subcontracts, sub-grants, and contracts under grant, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

RESTRICTION ON STATE LOBBYING

None of the funds under this program will be used for any activity specifically designed to urge or influence a State or local legislator to favor or oppose the adoption of any specific legislative proposal pending before any State or local legislative body. Such activities include both direct and indirect (e.g., "grassroots") lobbying activities, with one exception. This does not preclude a State official whose salary is supported with NHTSA funds from engaging in direct communications with State or local legislative officials, in accordance with customary State practice, even if such communications urge legislative officials to favor or oppose the adoption of a specific pending legislative proposal.

CERTIFICATION REGARDING DEBARMENT AND SUSPENSION

Instructions for Primary Certification

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

4. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms *covered transaction, debarred, suspended, ineligible, lower tier covered transaction participant, person, primary covered transaction, principal, proposal, and voluntarily excluded*, as used in this clause, have the meaning set out in the Definitions and coverage sections of 49 CFR Part 29. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR Part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification , in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR Part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the list of Parties Excluded from Federal Procurement and Non-procurement Programs.

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR Part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that its principals:

    (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;

    (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of record, making false statements, or receiving stolen property;

    (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

    (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the Statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Lower Tier Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

2. The prospective lower tier participant shall provide immediate written notice to the person to whom this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. The terms *covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded*, as used in this clause, have the meanings set out in the Definition and Coverage sections of 49 CFR Part 29. You may contact the person to whom this proposal is submitted for assistance in obtaining a copy of those regulations.

5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR Part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

6. The prospective lower tier participant further agrees by submitting this proposal that is it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -- Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions. (See below)

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR Part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the List of Parties Excluded from Federal Procurement and Non-procurement Programs.

8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR Part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
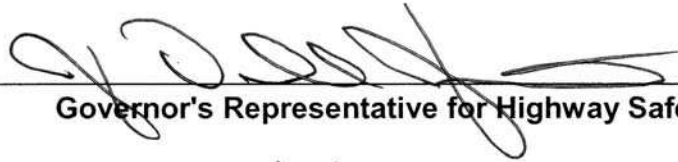
Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -- Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

ENVIRONMENTAL IMPACT

The Governor's Representative for Highway Safety has reviewed the State's Fiscal Year 2008 highway safety planning document and hereby declares that no significant environmental impact will result from implementing this Highway Safety Plan. If, under a future revision, this Plan will be modified in such a manner that a project would be instituted that could affect environmental quality to the extent that a review and statement would be necessary, this office is prepared to take the action necessary to comply with the National Environmental Policy Act of 1969 (42 USC 4321 et seq.) and the implementing regulations of the Council on Environmental Quality (40 CFR Parts 1500-1517).

_____
Governor's Representative for Highway Safety

_____
9/2/08
Date

EQUIPMENT REQUESTS $5,000 AND OVER

K4-09-04-01	Brunswick County Sheriff's Office	4 vehicles at $30,000	$120,000
		4 MDT's at $8,000	$32,000
		4 in-car videos at $6,000	$24,000
PT-09-03-03-03	Western Piedmont Community College	1 golf cart at $7,500	$7,500
K8-09-02-15 OP-09-05-05	Governor's Highway Safety Program	Expo restoration (continued)	$100,000
K2-09-07-02	Governor's Highway Safety Program	25 in-car videos at $6,000	$150,000
SB-09-13-01	NC Department of Public Instruction	1 Buster the Bus	$9,000
TR-09-10-03	Nash County Sheriff's Office	4 MDT's at $5,000	$20,000
K2-09-07-09	Carthage Police Department	1 in-car video at $6,000	$6,000
PT-09-03-03-02	UNC Greensboro Police Department	1 radar trailer/message board	$12,000
PT-09-03-03-01	UNC Greensboro Police Department	3 leased vehicles at $7,700	$23,100

PROGRAM COST SUMMARY

The Program Cost Summary for the State of North Carolina consists of the GTS – 217 form as required by NHTSA. The hard copy of this application includes a printed copy of this report. The electronic copy of this application does not have the GTS – 217 included but can be accessed by those approved to view the GTS – 217 report by NHTSA.

Appendix A

Highlighted Projects

FY 2009 Project Description

Project Number: PA-09-00-01
Agency: Governor's Highway Safety Program: Planning & Administration

Goals/Objectives: To implement and oversee local and state traffic safety contracts and grants. To implement statewide traffic safety programs such as "Click It or Ticket", "Booze It & Lose It", and "No Need 2 Speed"

Tasks/Description: Provide organizational structure that will allow for appropriate planning, evaluation, accounting, and oversight of federal highway safety funds. Establish procedures to assure that funds are being properly expended and that funds are being liquidated at an appropriate rate.

Cost Category	Total Amount	Federal %	Federal Amount	State %	State Amount	Local %	Local Amount
PROJECT BUDGET							
Personnel	$458,000	50	$229,000	50	$229,000		$
Contractual	$18,400	50	$9,200	50	$9,200		$
Commodities	$2,942	50	$1,471	50	$1,471		$
Direct	$61,000	50	$30,500	50	$30,500		$
Indirect	$150,000	50	$75,000	50	$75,000		$
Total	$690,342		345,171		$345,171		$0

PERSONNEL BUDGET DETAIL		
Quantity	Personnel	Amount
	Salaries, seven positions per NCDOT Activity Rates	$458,000
	Total	$458,000

CONTRACTUAL BUDGET DETAIL		
Vendor	Description	Amount
	State Parking Rental	$400
	Telephone service	$18,000
	Total	$18,400

COMMODITIES BUDGET DETAIL		
Quantity	Commodities Description	Amount
	Misc. supplies and support	$2,942
	Total	$2,942

OTHER DIRECT COSTS BUDGET DETAIL		
Quantity	Description	Amount
	In-State Travel	$20,000
	Out-of-State Travel	$20,000
	Postage Meter Rental and copier service contract	$7,000
	Dues & Subscriptions	$14,000
	Total	$61,000

INDIRECT COSTS BUDGET DETAIL		
Vendor	Description	Amount
	BSIPS charges	$150,000
	Total	$150,000

Project Number: AL-09-01-03
Agency: Mothers Against Drunk Driving (MADD)

Tasks/Description: Mothers Against Drunk Driving (MADD) is proposing various awareness campaigns to help prevent drunk driving and underage drinking across the state. Alcohol is the #1 youth drug problem and kills 6.5 times more youth than all other illicit drugs combined. Alcohol also plays an important role in the other leading causes of death for youth: homicides, suicides and unintentional injuries such as vehicle crashes and drowning. Overall traffic crashes are the leading cause of death for ages 4-33 and 1/3 of all crashes are alcohol related, North Carolina ranks 7th in the nation for alcohol related traffic deaths. On avarage 80,000 North Carolina citizens are arrested for DWI each year. Nearly 1/3 of DWI arrests are by repeat offenders.

GOALS/OBJECTIVES: MADD NC will continue educating the state on the dangers of drunk driving and underage drinking by enhancing and enlarging their existing programs and introducing new concepts to bring awareness of the dangers of driving while impaired. Provide presentations to schools, civic organizations, conferences and churches throughout the state. Provide trainings for programs like our youth in action and UMADD programs, along with attending the MADD National Conference and the Lifesavers Conference in 2009. Enhancing the protecting you, protecting me and the youth in action programs by including materials and training for adult coordinators and student leaders. Distribute materials and promotional items at the NC Chief of Police, Conference of DA's, NADA and CIADA. Increase school programs, corporate fairs and victim impact panels and the tie one on for safety event. Hold press conferences, special events, ribbon orders, distribution box orders and TOOFS/red ribbon kits. Partner with the local police, sheriff and highway patrol, participate in statewide checkpoints. Hold annual events such as the law enforcement awards ceremonies and holiday candle light vigils. Implement new programs in business and community outreach locations expand programs into three different areas that services are in high demand, military, PTA and the Hispanic population. Presentations, distribution of educational and promotional materials will be distributed to soldiers. In partnering with the NC-PTA, expanding school assemblies, class packs plus think prom/homecoming programs. Spanish literature and materials will be available and a Spanish translator on contract for our victim impact panels.

Project Number: AL-09-01-03
Agency: Mothers Against Drunk Driving (MADD)

PROJECT BUDGET							
Cost Category	**Total**	**Federal**		**State**		**Local**	
	Amount	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**
Personnel	$		$		$		$
Contractual	$1,500	100	$1,500		$		$
Commodities	$20,000	100	$20,000		$		$
Other Direct	$80,050	100	$80,050		$		$
Indirect Cost	$		$		$		$
Total	$101,550		$101,550		$		$
CONTRACTUAL BUDGET DETAIL							
Vendor	Description						**Amount**
	Translation Service for Victim Impact Panel						$1,500
						Total	$1,500
COMMODITIES BUDGET DETAIL							
Vendor	Description						**Amount**
	Education and Promotional Materials						$20,000
						Total	$20,000
OTHER DIRECT COSTS BUDGET DETAIL							
Quantity	Description						**Amount**
2	Fatal Vision Kits						$1,800
	Video Projection System						$2,250
	Checkpoint Supplies						$5,000
	Phone and Internet Services						$4,000
	Special Events						$15,000
	Law Enforcement Awards						$5,000
	School Outreach						$15,000
	NC Youth Conference						$12,000
	In State Travel						$12,000
	Out of State Travel						$8,000
						Total	$80,050

FY 2009 Project Description

Project Number: AL-09-01-04 / OP-09-05-03
Agency: El Pueblo

Goals/Objectives: Motor vehicle injuries are by far the leading cause of death for North Carolina Hispanics. Data from the UNC Highway Safety Research Center suggests that the causes of crashes for Hispanic drivers are more often related to alcohol and excessive speed. National data also indicates that Hispanics are less likely to use seat belts or child safety seats. The continuous flow of new immigrants who need to be educated on North Carolina traffic laws and highway safety issues contributes to this disproportionately high number of traffic fatalities and injuries. This lack of knowledge is compounded by language and cultural barriers. According to recent estimates the Latino population in North Carolina now exceeds 750,000 and growing. In 2008, Hispanics accounted for approximately 8% of North Carolina's population. For many years, Hispanics were disproportionately represented in crashes involving alcohol for many years. In 2007, North Carolina Hispanics were involved in 6.87% of crashes in which alcohol was a factor. From September 2002 - September 2007, Hispanic DWI charges accounted for 7.3% of all DWI charges. Since the inception of Nuestra Seguridad, Hispanic involvements in DWI crashes have dropped, as the Hispanic population continues to increases. Though we have managed to reduce the Latino DWI rate by more than 10% in short period of time, while the non-Latino DWI rate as increased, there remains a great deal of work to do. El Pueblo will work with the statewide coalition of organizations targeting the Latino community with safety messages and reduce the DWI fatalities by 10%. They will work to increase Latinos' awareness of North Carolina traffic safety issues, including, but not limited to: seat belt use, child safety seat use, and the prevention of speeding and drinking and driving.

Tasks/Description: El Pueblo will utilize the 11 Regional Coordinators throughout North Carolina in addition to those appointed by GHSP to distribute material. Serve as overarching organizer and support for regional groups. Provide technical assistance and training to Regional Coordinators, technical assistance will include on-site training regarding the campaign materials, Latino community issues, and bilingual capacity. Develop new material focusing on seatbelt use among Latinos. Organize quarterly meetings for Regional Coordinators. Re-print and distribute Fotonovelas, posters and bumper sticker throughout the state. Utilize DWI Golf cart at Latino events. Distribute Spanish-language materials and conduct presentations to Latino nonprofits, churches, health departments, law enforcement, and other government agencies that serve Latinos. Serve as a resource on Latino highway safety issues to local and statewide organizations to media and other requested venues. Participate in GHSP events, campaigns and child safety seat checks statewide. El Pueblo's main responsibilities will be to develop the network, monitor and evaluate the campaign

Project Number: AL-09-01-04 / OP-09-05-03
Agency: El Pueblo

PROJECT BUDGET								
Cost Category	Total	Federal		State		Local		
	Amount	%	Amount	%	Amount	%	Amount	
Personnel	$83,692	100	$83,692		$		$	
Contractual	$35,500	100	$35,500		$		$	
Commodities	$30,000	100	$30,000		$		$	
Other Direct	$37,530	100	$37,530		$		$	
Indirect Cost	$		$		$		$	
Total	$186,722		$186,722		$		$	
PERSONNEL BUDGET DETAIL								
Quantity	Personnel						Amount	
	Public Safety Director						$44,600	
	Public Safety Project Specialist						$24,000	
	Fringes						$15,092	
						Total	$83,692	
CONTRACTUAL BUDGET DETAIL								
Vendor	Description						Amount	
	Regional Coordinators						$27,500	
	Graphic and Web Design						$5,500	
	Copier Rental and Maintenance						$1,000	
	Auditor						$1,500	
						Total	$35,500	
COMMODITIES BUDGET DETAIL								
Vendor	Description						Amount	
	Supplies and Postage						$5,000	
	Printing						$15,000	
	Promotional Items						$10,000	
						Total	$30,000	
OTHER DIRECT COSTS BUDGET DETAIL								
Quantity	Description						Amount	
	Training and Outreach						$10,000	
	Occupancy						$12,530	
	Phone and Internet						$2,500	
	Miscellaneous						$500	
	In State Travel						$5,000	
	Out of State Travel						$7,000	
						Total	$37,530	

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FY 2009 Project Description

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Project Number: K8-09-02-02
Agency: Forensic Tests for Alcohol – Bat Mobile Program

GOALS/OBJECTIVES: The BAT Program will continue to enhance public awareness by displaying the bat mobile units at highway safety/educational events across the state. This will continue to have an impact in reducing the number of drinking drivers on our highways by reaching more of the public and young adults to explain the dangers of alcohol and drinking and driving. Presently, the BAT Program is utilized at the State Fair, state agency health fairs and city and county community events statewide. BAT Units are routinely used at high schools, colleges and universities to emphasize the message of the dangers of drinking and driving. In 2007, more than 65,180 people visited the BAT Mobile Units. Presently, the BAT Program provides a service to all law enforcement statewide. This service consists of agencies soliciting the BAT Program by requesting use of a BAT Unit(s) to be utilized at a DWI checkpoint and/or highway safety educational event. The bat unit is used to process the drinking driver on location at the designated DWI checkpoint. This service eliminates the officer arresting the drinking driver and having to transport the driver to a law enforcement facility away from the checkpoint. The bat units are equipped with all necessary equipment such as DWI checkpoint signs, traffic cones, portable lighting, and alcohol screening test devices, cellular phones, documents and supplies utilized in processing the drinking driver. The BAT Units are also utilized throughout the state as an educational tool to educate the general public and young adults about the dangers of alcohol and drinking and driving.

TASKS/DESCRIPTION: Coordinate with law enforcement agencies across the state for scheduling the BAT Mobile Unit DWI checkpoints to include providing the expertise regarding DWI checkpoints. Coordinate scheduling the BAY Mobile Unit to be utilized at educational events across the state to include high schools, community colleges and universities across the state. Assist the Governor's Highway Safety Program during their DWI campaigns. Provide support to law enforcement and state prosecutors regarding issues related to drinking and driving

Project Number: K8-09-02-02
Agency: Forensic Tests for Alcohol – Bat Mobile Program

PROJECT BUDGET							
Cost Category	**Total**	**Federal**		**State**		**Local**	
	Amount	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**
Personnel	$45,729	100	$45,729		$		$
Contractual	$		$		$		$
Commodities	$8,060	100	$8,060		$		$
Other Direct	$69,830	100	$69,830		$		$
Indirect Cost	$		$		$		$
Total	$123,619		$123,619		$		$
PERSONNEL BUDGET DETAIL							
Quantity	Personnel						**Amount**
1	Staff Development Tech II Salary and Fringes						$45,729
						Total	$45,729
COMMODITIES BUDGET DETAIL							
Vendor	Description						**Amount**
	Promotional Items						$8,060
						Total	$8,060
OTHER DIRECT COSTS BUDGET DETAIL							
Quantity	Description						**Amount**
	Cell Phone Communications						$5,000
	Laptop Computer and Carrying Case						$1,500
	Camcorder						$800
	Fatal Vision Goggles						$530
	Printing						$3,000
	In-State Travel						$53,000
	Out of State Travel						$6,000
						Total	$69,830

FY 2009 Project Description

Project Number: K8-09-02-14
Agency: Wake County District Attorney's Office

GOALS/OBJECTIVES: Wake County's current population of 850,000 residents is projected to increase to one million by 2013. The population growth over the years has been accompanied by an increasing number of motor vehicle and DWI cases: there were approximately 87,300 motor vehicle cases filed in 2005, 97,000 filed in 2006, and 102,000 filed in 2007. DWI cases comprise about 10% of all motor vehicle filings each year, and are a time-consuming portion of the prosecutors' workload. The backlog of DWI cases has increased, evidenced by the increasing number of pending cases that are at least one year old (804 cases in 2005, 859 cases in 2006, 897 cases in 2007). The median age of pending cases has also increased steadily over the past 3 years, from 141 days in 2005 to 167 days in 2007. Wake County currently holds DWI court twice a week with a focus on cases that have been pending for at least one year and involve complex issues of personal injury. With the DWI cases continuing to increase both in number and complexity, the DWI court needs to be expanded by having a full-time prosecutor and an additional three days of court per week.

Tasks/Description: Wake County District Attorney's Office plans to hire one full-time DWI Prosecutor to conduct a DWI Court in order to expedite the prosecution of DWI cases therefore reducing cases that are pending more than one year. By expanding the DWI Court from two (2) days per week to five (5) days per week the median age of pending DWI cases will be significantly reduced

PROJECT BUDGET							
Cost Category	Total Amount	Federal		State		Local	
		%	Amount	%	Amount	%	Amount
Personnel	$57,305	100	$57,305		$		$
Contractual	$		$		$		$
Commodities	$		$		$		$
Other Direct	$		$		$		$
Indirect Cost	$		$		$		$
Total	$57,305		$57,305		$		$
PERSONNEL BUDGET DETAIL							
Quantity	**Personnel**						Amount
	Full Time Prosecutor						$43,538
	Fringes						$13,767
						Total	$57,305

FY 2009 Project Description

Project Number: K8-09-02-15/OP-09-05-05
Agency: GHSP – Highway Safety Exhibits

Goals/Objectives: The North Carolina Highway Safety Exposition (EXPO) is a mobile trailer which contains animation, video, sound, music and touch screens.. The EXPO has recently been renovated with a new trailer including new driving simulators. The new simulator has yet to be "marketed" to schools and fairs. GHSP will need to market the trailer as a new state-of- the- art educational tool.

Tasks/Description: Continue the EXPO schedule and publicize the new EXPO and promote Safety City at the NC State Fair and Mountain State Fair.

Cost Category	Total Amount	Federal		State		Local	
		%	Amount	%	Amount	%	Amount
Personnel	$53,600	100	53,600		$		$
Contractual	$16,000	100	16,000		$		$
Commodities	$30,000	100	30,000		$		$
Direct	$152,000	100	152,000		$		$
Indirect	$25,160	100	25,160		$		$
Total	$276,760		276,760		$		$

PROJECT BUDGET

PERSONNEL BUDGET DETAIL

Quantity	Personnel	Amount
1	Part time driver	$40,000
	Fringes	$13,600
	Total	$53,600

CONTRACTUAL BUDGET DETAIL

Vendor	Description	Amount
	Software License/Warranty	$6,000
	NC. Mountain State Fair	$3,000
	NC State Fair	$7,000
	Total	$16,000

COMMODITIES BUDGET DETAIL

Quantity	Commodities Description	Amount
	Printing & supplies	$10,000
	Decals for Trailers & trucks	$20,000
	Total	$30,000

OTHER DIRECT COSTS BUDGET DETAIL

Quantity	Description	Amount
	Expo restoration (continued)	$100,000
	Instate travel	$50,000
	Out of state travel	$2,000
	Total	$152,000

INDIRECT COSTS BUDGET DETAIL

Vendor	Description	Amount
	GHSP overhead 10%	$25,160
	Total	$25,160

FY 2009 Project Description

Project Number: K8-09-02-17
Agency: NC Sheriff's Association

Goals/Objectives: Through this project the North Carolina Sheriffs' Association will increase the knowledge of a substantial number of law enforcement officers in the changes made to the Driving While Impaired Statutes and other traffic related statute changes to the North Carolina Motor Vehicle Laws and the more than 180 additions or changes in the North Carolina General Statutes in areas such as Motor Vehicle Law, Identity Theft, and other traffic safety Issues.

Tasks/Description: To provide education on the changes in the North Carolina Motor Vehicle Laws relating to Driving While Impaired and other traffic related statute changes through publications and training programs that will increase the knowledge of law enforcement officers about these substantial changes. Provide information via publication and instruction on those new laws relating to identity theft and the additional Motor Vehicle Laws that enhance the ability of law enforcement officers to combat these identity theft issues that surface through traffic stops. Conduct 5 one day seminars on the over 180 legislative bills containing changes in the statues of North Carolina that impact Sheriffs' Deputies and other law enforcement officers. Provide a Legislative Update publication to all attendees that impact law enforcement officers of North Carolina. Conduct this training in accordance with the guidelines set forth by the North Carolina Criminal Justice Education and Training Standards Commission, and the North Carolina Sheriffs' Education and Training Standards Commission on the conduct of In-Service Training so that the training received will meet the criteria needed to assist the officer attendees in satisfying the state mandated training requirements.

PROJECT BUDGET							
Cost Category	**Total**	**Federal**		**State**		**Local**	
	Amount	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**
Personnel	$		$		$		$
Contractual	$3,000	100	$3,000		$		$
Commodities	$2,500	100	$2,500		$		$
Other Direct	$17,019	100	$17,019		$		$
Indirect Cost	$5,500	100	$5,500		$		$
Total	$28,019		$28,019		$		$
CONTRACTUAL BUDGET DETAIL							
Vendor	**Description**						**Amount**
	Instructor Fees						$3,000
						Total	$3,000
COMMODITIES BUDGET DETAIL							
Vendor	**Description**						**Amount**
	Promotional Items						$2,500
						Total	$2,500
OTHER DIRECT COSTS BUDGET DETAIL							
Quantity	**Description**						**Amount**
	Printing						$3,500
	In-State Travel						$13,519
						Total	$17,019
INDIRECT COST BUDGET DETAIL							
Quantity	**Description**						**Amount**
	Overhead Cost						$5,500
						Total	$5,500

FY 2009 Project Description

Project Number: OP-09-05-02
Agency: Governor's Highway Safety Program, Occupant Protection PI&E

Goals/Objectives: To sustain the implementation and support of the statewide "Click It or Ticket" campaign and the RU Buckled Program. Disseminate information and materials to North Carolina motorists concerning the risks associated with driving, or riding unbuckled. Decrease the number of injuries and fatalities where motorists are unbuckled. The current North Carolina statewide safety belt usage rate is 88.8 percent.

Tasks/Description: Develop media spots for placement during time slots that are known to have the demographic target audience for the most common unbuckled drivers and passengers. Place paid media spots where they will have the most impact. Develop effective sports marketing programs with the Carolina Hurricane, ACC Basketball and NFL Carolina Panthers. Develop promotional items that carry buckle up messages, focused on enforcement, for distribution at fairs, festivals, school functions, etc. Conduct press events to draw attention to occupant protection problems. Foster activities that will draw earned media attention.

PROJECT BUDGET							
Cost Category	**Total**	**Federal**		**State**		**Local**	
	Amount	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**
Personnel	$0	100	$0				
Contractual	$213,000	100	$213,000				
Commodities	145,000	100	145,000				
Direct	48,000	100	48,000				
Indirect	40,620	100	40,620				$
Total	446,820		446,820		$0		$0
CONTRACTUAL BUDGET DETAIL							
Vendor	Description						**Amount**
	News clipping service						$1,200
	Materials shipping and handling						$12,000
	Sports marketing						$200,000
						Total	$213,000
COMMODITIES BUDGET DETAIL							
Quantity	Commodities Description						**Amount**
	"Click It or Ticket" Promotional Items (hats, shirts, clickers, etc.)						$75,000
	RU Buckled Promotional items						$50,000
	Printing						$20,000
						Total	$145,000
OTHER DIRECT COSTS BUDGET DETAIL							
Quantity	Description						**Amount**
	Press events						$2,000
	Youth conference						$30,000
	PSA production						$10,000
	Vehicle (van 55370)						$6,000
						Total	$48,000
INDIRECT COSTS BUDGET DETAIL							
Vendor	Description						**Amount**
NCDOT	10% of total						$40,620
						Total	$40,620

FY 2009 Project Description

Project Number: K3-09-06-01
Agency: NC Department of Insurance – NC Safe Kids

GOALS/OBJECTIVES: The increase in population and number of children in motor vehicles has heightened the number of injuries and deaths of children 14 and under in NC over the past few years. In 1982 when the first child passenger safety law was passed it covered children age one and under. At that time 30 % of children under age six were observed to be buckled up in any type of restraint, many were in a seat belt only. Before the NC CPS law went into effect, the percentage of children under age 6 who were either killed or seriously injured in a crash was 1.7 percent. The current cps law covers all children under age 16 and requires children 8 years old or 80 pounds to be in a child restraint. Between 2003-2005, 19,600 children were involved in crashes. The pecentage of children under age six who were killed or seriously injured ina crash was approximately .4%. If those children had been injured at the same rate as the children prior to the inception of our law, 325 children would have been killed or sustained a serious injury. Due to our strong passenger safety law, as well as local educational and enforcement programs, over 250 nc children are saved from death and injury each year. Nearly 90 percent of children under age 6 have been observed to be buckled up. Most of them were in a child restraint or booster. The four steps of properly restraining children from infant seat to convertible to booster seat and then to seat belt is still not followed due to lack of education on the dangers associated with these actions. Booster seat awareness campaigns are useful in provided this needed education. In addition, research has shown that latino populations and residents in rural areas do not understand the hazards associated with not restraining children, themselves, and other passengers. There is a need to educate people in all counties in NC about the importance of child passenger safety through training programs such as Buckle Up Kids.

Tasks/Description: NC DOI Safe Kids will continue to increase the usage of child restraints, booster seats, and seat belts in order to reduce the number of injuries and deaths to motor vehicle occupants by collaborating with local and state child passenger safety programs. They will offer National CPS Technician classes, provide 10 regional CPS courses to fire/rescue, law enforcement, hospital, health care, and other child safety advocates. Fund instructors for CPS courses in communities that host technician courses in addition to those staffed by NCDOI-OSFM. Provide 10 update/ refresher or renewal classes to assist technicians in maintaining certification by acquiring continuing education units. Assist Western North Carolina Safe Kids in administering Special Needs classes. Class contracts will be coordinated by NCDOI-OSFM including travel for instructors for meals, mileage and lodging and scholarships. Host CPS Training Committee members and provide scholarships for members meals, lodging and mileage. Make available 20- $1000 or 40-$500 revitalization grants for Permanent Checking Stations to restock supplies, materials and update equipment. Host CPS Conference in conjunction with the CPS training committee. This will provide continuing education for technicians throughout NC. Distribute child restraints to local Buckle Up Kids counties and compile data through quarterly reports. In addition, NC Safe Kids will offer scholarships to local agencies to receive child passenger safety certification by reimbursing travel costs including meals and lodging. Create a Bike and Pedestrian Safety Trailer to be used throughout the state to assist local communities with safety information.

Project Number: K3-09-06-01
Agency: NC Department of Insurance – NC Safe Kids

PROJECT BUDGET								
Cost Category	Total Amount	Federal		State		Local		
		%	Amount	%	Amount	%	Amount	
Personnel	$20,000	100	$20,000		$		$	
Contractual	$84,200	100	$84,200		$		$	
Commodities	$458,000	100	$458,000		$		$	
Other Direct	$131,000	100	$131,000		$		$	
Indirect Cost	$		$		$		$	
Total	$693,200		$693,200		$		$	

PERSONNEL BUDGET DETAIL		
Quantity	**Personnel**	Amount
	CPS Assistance Clerical	$20,000
	Total	$20,000

CONTRACTUAL BUDGET DETAIL		
Vendor	**Description**	Amount
	CPS & Special Needs Instructors	$70,000
	CPS Conference	$10,000
	Accounting Contract	$4,200
	Total	$84,200

COMMODITIES BUDGET DETAIL		
Vendor	**Description**	Amount
	Office Supplies, Promotional Items and LATCH for Instructors	$28,000
	Printing	$30,000
	Child Restraints	$400,000
	Total	$458,000

OTHER DIRECT COSTS BUDGET DETAIL		
Quantity	**Description**	Amount
	Bike, Pedestrian and Trainings Supplies	$11,000
	CPS Committee, Outreach and Instructor Meetings	$10,000
	Vehicle Cost	$50,000
	Scholarships for classes/snacks	$10,000
	Permanent Checking Stations Mini Grants	$20,000
	In-State Travel	$25,000
	Out of State Travel	$5,000
	Total	$131,000

INDIRECT COST BUDGET DETAIL		
Quantity	**Description**	Amount
		$
	Total	$

Project Number: K3-09-06-02
Agency: Western North Carolina Safe Kids (WNCSK)

Goals/Objectives: Special Needs Transports in North Carolina is a growing problem. Around 20% of children in NC have one or more special need. These families are frequently receiving public assistance and have financial needs on many levels. There is limited awareness regarding safe transportation of this population. Often, costly specialized child restraints are needed to properly transport theses children. Another issue in Western NC is the Tweens. Motor vehicle crashes are the leading cause of death for 15 to 20 year olds. Tweens and teens are less likely to wear seat belts than people of other ages. Seat belt use among teens killed or injured in crashes is about 57%.Tweens frequently sit in the front seat when they should still be in the back seat, thus making them 40% more likely to be injured in a crash. It is necessary to the growth of the CPS program to keep technicians motivated and "in the know" of current CPS information, i.e., new technology, new products, new seats, and changes in the law. The availability of well-informed resource persons and instructors is critical to keeping adequate numbers of CPS technicians.

Tasks/Description: WNCSK will increase the safe transportation of children with special health care needs by continuing to partner with the other active Special Needs Instructor in the state to increase the number of CPS Technicians trained in Special Needs in our region and throughout North Carolina. Expand their seating clinics for children with special needs associated with Mission Children's Hospital and in the Western NC region. In addition, WNC will support the NC GHSP "R U Buckled" program in area high schools, by supporting Buncombe County Sheriffs Department in implementation. Partner with NC State Highway Patrol at the 2008 Mountain State Fair as venue for an interactive safety demonstration and information addressing vehicle safety, from birth to adult. Provide training materials for updated CPS information and provide training opportunities for CEU's (continuing education units) for technician recertification. Maintain well-informed resource people and instructors through continuing education. Provide incentives to community partners, recognizing their contribution to highway safety. Act as a resource for the Western Counties on safe ambulance transport of children. Act as a consultant for local law enforcement in their injury prevention programs and events. Continue to be active with Smoky Mountain Law Enforcement Executive Association, and CPS updates and available resources for Highway Safety and Children.

Project Number: K3-09-06-02
Agency: Western North Carolina Safe Kids (WNCSK)

PROJECT BUDGET								
Cost Category	Total Amount	Federal		State		Local		
		%	Amount	%	Amount	%	Amount	
Personnel	$50,068	100	$50,068		$		$	
Contractual	$3,500	100	$3,500		$		$	
Commodities	$		$		$		$	
Other Direct	$25,765	100	$25,765		$		$	
Indirect Cost	$39,950		$		$	100	$39,950	
Total	$119,283		$79,333		$		$39,950	
PERSONNEL BUDGET DETAIL								
Quantity	Personnel						Amount	
	Educator and Secretary Salary with Fringes						$50,068	
						Total	$50,068	
CONTRACTUAL BUDGET DETAIL								
Vendor	Description						Amount	
	Rental Space for Mt. State Fair						$3,500	
						Total	$3,500	
OTHER DIRECT COSTS BUDGET DETAIL								
Quantity	Description						Amount	
	Special Needs Child Restraints						$8,500	
	Special Needs Seats for Distribution						$5,000	
	Annual Law Enforcement Appreciation Banquet						$2,000	
	Printing Cost						$1,200	
	In-State Travel						$2,465	
	Out of State Travel						$6,600	
						Total	$25,765	
INDIRECT COST BUDGET DETAIL								
Quantity	Description						Amount	
	Office Space, Office Supplies and Utilities'						$39,950	
						Total	$39,950	

FY 2009 Project Description

Project Number: K3-09-05-03
Agency: North Carolina Highway Safety Research Center

Goals/Objectives: Coordinate state and local CPS education, training, distribution and "hands on" technical assistance programs and activities. The goal of the Child Passenger Safety Resource Center is to serve as a centralized source for North Carolina specific information. UNC HSRC will also conduct and analyze child restraint observational surveys.

Tasks/Description: To provide consumer information to the general public through the toll free phone number, web site and informational brochures and flyers. To provide program and technical assistance to CPS advocates and programs administrators by keeping curriculum and information current. Print and distribute the North Carolina Basic Awareness course materials. Coordinate and monitor all the Child Passenger Safety (CPS) training activities and programs in North Carolina. Support monthly meetings of the North Carolina CPS Training Committee. Register and pay for participants of the national certification course. Inventory community CPS distribution, education and technical assistance programs. Maintain and keep current the web site: www.buckleupnc.org. Plan and conduct child restraint observational surveys and analyze resulting data.

Project Number: K3-09-05-03
Agency: North Carolina Highway Safety Research Center

PROJECT BUDGET								
Cost Category	Total Amount	Federal		State		Local		
		%	Amount	%	Amount	%	Amount	
Personnel	$85,129	100	$85,129		$		$	
Contractual	$		$		$		$	
Commodities	$10,430	100	$10,430		$		$	
Direct	$15,105	100	$15,105		$		$	
Indirect	$11,066	100	$11,066		$		$	
Total	$121,730		$121,730		$		$	

PERSONNEL BUDGET DETAIL		
Quantity	Personnel	Amount
	Principal Investigator	$15,367
	EPA TBH (Research Assistant)	$37,205
	Design services manager	$960
	Applications & Data Specialist	$3,054
	Systems administrator: support	$8,488
	Undergraduate/graduate assistant: support	$2,829
	Fringes	$17,226
	Total	$85,129

COMMODITIES BUDGET DETAIL		
Quantity	Commodities Description	Amount
	Project Supplies and photocopies	$455
	Training Supplies (46 CR's @ 100)	$4,600
	Additional project supplies	$735
	Dolls-4 sets of 5 @360	$1,440
	Dolls- 4 sets of 4 @300	$1,200
	Website promotional items	$2,000
	Total	$10,430

OTHER DIRECT COSTS BUDGET DETAIL		
Quantity	Description	Amount
	Communications (FedEx, bulk postage, UPS, Domain Name)	$300
	Printing	$6,500
	Toll Free Watts line: Monthly Service	$500
	Workshop expenses	$100
	Misc. Services (UNC Visitor parking fees)	$100
	Self-storage unit lease	$1,680
	Subscription to Safety Belt USA	$125
	In-State Travel	$2,800
	Out – of – State Travel	$3,000
	Total	$15,105

INDIRECT COSTS BUDGET DETAIL		
Vendor	Description	Amount
	UNC Facilities & Administrative Costs (10%)	$11,066
	Total	$14,585

FY 2009 Project Description

Project Number: K2-09-07-02
Agency: GHSP – Points System

Goals/Objectives: To increase agency participation and reporting during campaigns as well as to encourage year-round traffic safety activity. This program allows law enforcement agencies to receive points based on several point earning activities such as checkpoints, educational and enforcement events. Agencies can accumulate points all year and "redeem" their points for traffic related equipment from a specific list.

Tasks/Description: Points will be compiled for the period of October 1, 2008 through September 30, 2009. Extra points will be awarded to those agencies qualifying for 100% reporting during campaigns. Agencies wishing to redeem their points will file a request for the equipment they wish to receive. Points may be "carried over" from one year to another in order to earn points for one of the larger point items. Upon receipt of request forms, GHSP will order the equipment and present to the requesting agencies.

PROJECT BUDGET							
Cost Category	**Total Amount**	**Federal**		**State**		**Local**	
		%	**Amount**	**%**	**Amount**	**%**	**Amount**
Personnel	$		$		$		$
Contractual	$		$		$		$
Commodities	$		$		$		$
Direct	$61,250	100	$61,2500		$		$
Checkpt Eqpt	$		$		$		$
Indirect	$61,250	100	$61,250		$		$
Total	$673,750		$673,750		$		$

OTHER DIRECT COSTS BUDGET DETAIL			
Quantity	Description		**Amount**
125	Dual antenna radar units		$312,500
100	Single antenna radar units		$150,000
25	In car video systems		$150,000
		Total	$612,500

INDIRECT COSTS BUDGET DETAIL			
Vendor	Description		**Amount**
	GHSP overhead 10%		$61,250
		Total	$61,250

Project Number: MC-09-08-01
Agency: NC Motorcycle Safety Education Program

Goals/Objectives: North Carolina has an increasing interest in motorcycle safety education. NC has identified an alarming number of motorcycle injuries. In investigating these injuries, it has been determined that those injured were not trained in the Motorcycle Safety Education Program. The goal is to make more sites available to reach more citizens of NC for training

Tasks/Description: Purchase equipment and supplies. Establish a new training site to train students in proper motorcycle safety. Ensure a highly qualified team of Rider-Coaches in accordance with the requirements of the Motorcycle Safety Foundation to train new students.   Distribute training aids and promotional items during professional development programs to students and instructors.

Cost Category	Total Amount	Federal		State		Local	
		%	Amount	%	Amount	%	Amount
Personnel	$		$		$		$
Contractual	$8,000	50	$4,000		$	50	$4,000
Commodities	$9,000	50	$4,500		$	50	$4,500
Direct	$30,000	50	$15,000		$	50	$15,000
Checkpt Eqpt	$		$		$		$
Indirect	$		$		$		$
Total	$47,000		$23,500		$		$23,500

CONTRACTUAL BUDGET DETAIL		
Vendor	Description	**Amount**
8	Rider Coach Candidate Motel (8) Weekends @ $1000 Each	$8,000
	Total	$8,000

COMMODITIES BUDGET DETAIL		
Quantity	Commodities Description	**Amount**
10000	Program Patches @.60 each	$6,000
10000	Program Decals @ .30 each	$3,000
	Total	$9000

OTHER DIRECT COSTS BUDGET DETAIL		
Quantity	Description	**Amount**
10	Training Motorcycles @$3000	$30,000
	Total	$30,000

FY 2009 Project Description

Project Number: MC-09-08-02
Agency: NC State Highway Patrol

Goals/Objectives: North Carolina has an increasing interest in motorcycle safety education. NC has identified an alarming number of motorcycle injuries and fatalities. In investigating these injuries/fatalities, it has been determined many those injured/killed show a lack of proper riding skills. The goal is to make BikeSafe North Carolina available through more local law enforcement agency motor units to reach more citizens of NC for riding skills assessments.

Tasks/Description: Purchase equipment and supplies. Establish a new assessor sites to assess and educate riders in proper motorcycle safety. Ensure a highly qualified team of Motorofficer/Assessors in accordance with the requirements of the BikeSafe North Carolina to evaluate and educate more riders. Distribute training aids and promotional items during professional development programs to assessors and motorcycle riders.

PROJECT BUDGET							
Cost Category	Total Amount	Federal		State		Local	
		%	Amount	%	Amount	%	Amount
Personnel	$		$		$		
Contractual							
Commodities							
Direct	$50,865	100	$50,865				
Indirect	$		$		$		
Total	$50,865		$50,865		$		$50,865

OTHER DIRECT COSTS BUDGET DETAIL		
Quantity	Description	Amount
1	LE Motorcycle Bikesafe and enforcement use	$16,000
	Travel	$3,000
1000	Brochures	$10,000
5000	Posters	$1,750
1000	Lapel Pins	$1,000
1000	Tire Gauges	$1,190
4000	Ink Pens	$2,600
2500	Key Chains	$1,125
1500	Kickstand Pucks	$4,500
222	Reflective Vests	$4,000
50	Assessor Shirts	$2,500
200	DVD Lesson Plans	$200
500	Caps	$3,000
	Total	$50,865

FY 2009 Project Description

Project Number: TR-09-10-02
Agency: UNC - HSRC Crash Data Web Site
Goals/Objectives: Upgrade the website by adding the 2008 data. Maintain the website and revise system as needed.
Tasks/Description:

Cost Category	Total Amount	Federal		State		Local	
		%	Amount	%	Amount	%	Amount
Personnel	$44,466	100	$44,466		$		$
Contractual	$		$		$		$
Commodities	$152	100	$152		$		$
Direct	$300	100	$300		$		$
Indirect	$4,492	100	$4,492		$		$
Total	$49,410		$49,410		$		$

PROJECT BUDGET

PERSONNEL BUDGET DETAIL

Quantity	Personnel	Amount
	Principal investigator	$7,855
	Design services manager	$3,118
	applications & data specialist	$19,814
	Application specialist	$1,709
	Systems administrator: support	$3,440
	Undergrad/grad assistant; support	$1,147
	Fringe Benefits	$7,383
	Total	$44,466

COMMODITIES BUDGET DETAIL

Quantity	Commodities Description	Amount
	Project supplies/photocopies	$152
	Total	$152

OTHER DIRECT COSTS BUDGET DETAIL

Quantity	Description	Amount
	In state travel	$300
	Total	$300

INDIRECT COSTS

Vendor	Description	Amount
	UNC facilities and administrative costs	$4,492
	Total	$4,492

FY 2009 Project Description

Project Number: K9-09-11-01
Agency: GHSP – Traffic Records

Goals/Objectives: Provide salaries, benefits and travel funding for one Grant management Specialist for implementation of Traffic Records in North Carolina. Provide technical assistance and travel funding to grantee.
Tasks/Description: Grant management specialist will provide oversight, monitoring and technical assistance to grant recipients and potential customers. Provide funding and travel as requested.

Cost Category	Total Amount	\%	Federal Amount	\%	State Amount	\%	Local Amount
Personnel	$79,700	100	79,700				
Contractual	$		$				
Commodities	$5,000	100	5,000				
Direct	$15,000	100	15,000				
Indirect	$		$				
Total	$99,700		99,700				

PROJECT BUDGET

PERSONNEL BUDGET DETAIL

Quantity	Personnel	Amount
	Salary and fringes for specialist (80%)	$79,700
	Total	$79,700

COMMODITIES BUDGET DETAIL

Quantity	Commodities Description	Amount
	Supplies and support	$5,000
	Total	$5,000

OTHER DIRECT COSTS BUDGET DETAIL

Quantity	Description	Amount
	In-state travel	$10,000
	Out-of-state travel	$5,000
	Total	$15,000

FY 2009 Project Description

Project Number: RH-09-12-01
Agency: NC Operation Lifesaver, Inc.

Goals/Objectives: Increase law enforcement involvement in collision prevention and more training for law and first responders. Present OL to the Hispanic population and other groups that seem to be unaware of the dangers around trains and rails. Increase partnerships working for rail safety in NC.

Tasks/Description: Conduct 5 presenter classes. Conduct 6 GCCI classes. Hold 6 RSER classes. Work on safety events throughout the year to educate the public. Attend National OL conference.

Cost Category	Total Amount	Federal		State		Local	
		%	Amount	%	Amount	%	Amount
Personnel	$8,000	100	$8,000				
Contractual	$		$				
Commodities	$63,000	100	$63,000				
Direct	$9,000	100	$9,000				
Indirect	$		$				
Total	$80,000		$80,000				

PERSONNEL BUDGET DETAIL		
Quantity	Personnel	Amount
1	Administrative Assistant	$4,000
1	Engineer	$4,000
	Total	$8,000

COMMODITIES BUDGET DETAIL		
Quantity	Commodities Description	Amount
	Meals, lodging, mileage, books, materials, videos etc for GCCI and RSER classes. Promotional items, postage, printed materials and all costs related to classes. Insurance for LLL train.	63,000
	Total	63,000

OTHER DIRECT COSTS BUDGET DETAIL		
Quantity	Description	Amount
	Travel In-state	$3,000
	Travel out of state. Lifesavers 7 NAWHSL	$5,000
	Laptop computer	$1,000
	Total	$9,000

Project Number: SB-09-13-01
Agency: NC Department of Public Instruction – Buster the Bus

Tasks/Description: The Department of Public Instruction declares that children travelling to and from school are the safest on a school bus. When riding the bus, the danger to children is in the "danger zone" around the school bus. This is where most school bus related fatalities take place. Since 1999, there have been 6 student fatalities resulting from vehicles that did not stop for the school bus. By teaching students in grades K-3 the key rules of school bus safety and reach middle and high school students with a similar, age-appropriate, message will promote awareness of the danger zone. Motorists need to become mindful of the potential danger when they are driving around school buses. This is one of the key issues dealing with school transportation in North Carolina. Also help motorists become familiar with the danger to school children when they are not careful around school bus stops. Help the general public understand the laws of school transportation and how they can impact the safety of children.

Goals/Objectives: The Department of Public Instruction will provide an additional Buster the Bus robot to the western part of the state. Currently there are over 20 Buster the School Bus robot's around the state that are used for education of elementary students, at community events, and provides a means by which school transportation staff can give information on the school bus stop law to parents. Education materials to be used in conjunction with Buster presentations will be made available statewide, including at the N.C. State Fair. Materials with school bus safety rules will be purchased for young students. Attending National and regional school transportation conferences provide opportunities to learn of important new safety issues. State and school district staff will attend regional training and a representative from DPI will be sent to a national meeting to gather ideas from other localities that can be applied in NC schools. Materials for the public will be purchased to be shared at community events (e.g. fairs, festivals, etc) along with lessons by Buster the Bus. Information will be printed and posted on the WWW.NCBUSSAFETY.ORG web page and press releases referencing these materials will call attention to the issue.

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Project Number: SB-09-13-01
Agency: NC Department of Public Instruction – Buster the Bus

PROJECT BUDGET							
Cost Category	**Total**	**Federal**		**State**		**Local**	
	Amount	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**
Personnel	$11,000		$	100	$11,000		$
Contractual	$6,000	100	$6,000		$		$
Commodities	$13,200	100	$13,200		$		$
Other Direct	$12,700	100	$12,700		$		$
Indirect Cost	$		$		$		$
Total	$42,900		$31,900		$11,000		$
PERSONNEL BUDGET DETAIL							
Quantity	Personnel						**Amount**
	State School Positions State Match						$11,000
						Total	$11,000
CONTRACTUAL BUDGET DETAIL							
Vendor	Description						**Amount**
	Web Design and Updates						$6,000
						Total	$6,000
COMMODITIES BUDGET DETAIL							
Vendor	Description						**Amount**
	Education Materials						$12,300
	Contest Awards						$900
						Total	$13,200
OTHER DIRECT COSTS BUDGET DETAIL							
Quantity	Description						**Amount**
	Buster the Bus						$9,000
	In State Travel						$1,500
	Out of State Travel						$2,200
						Total	$12,700